

**Stream Habitat and Macroinvertebrate Communities in Selected Streams of
the Chattahoochee-Oconee National Forest, GA and Cherokee National
Forest, TN**



United States Department of Agriculture Forest Service
Southern Research Station
Center for Aquatic Technology Transfer

1650 Ramble Rd.
Blacksburg, VA 24060-6349



**Stream Habitat and Macroinvertebrate Communities in Selected Streams of
the Chattahoochee-Oconee National Forest, GA and Cherokee National
Forest, TN**

United States Department of Agriculture Forest Service
Center for Aquatic Technology Transfer

1650 Ramble Road
Blacksburg, VA 24060-6349

Craig N. Roghair
John D. Moran
Daniel R. Nuckols
Fisheries Biologists

and

C. Andrew Dolloff
Project Leader
Coldwater Fisheries Research Unit
Southern Research Station

Prepared by:
John D. Moran and Craig N. Roghair

July 2003

Table of Contents

List of Tables	4
List of Figures	5
Introduction.....	7
Methods.....	7
Habitat Survey	7
Macroinvertebrates	9
Pebble Counts	9
Results.....	10
Conclusion	10
Literature Cited	16
Appendix A: Habitat Survey Summaries.....	17
Appendix B: Pebble Count Summaries	124
Appendix C: Macroinvertebrate Report.....	136

List of Tables

Table 1. Substrate size classes used during BVET habitat surveys.....	15
Table 2. Description of habitat types used during BVET habitat surveys.....	15
Table 3. Large woody debris (LWD) size classes used during BVET habitat surveys	15
Table 4. Substrate size classes used during pebble count survey data analysis.....	15

Appendix A: habitat survey summaries, stream features

<u>Broad River drainage</u>	
Big Leatherwood Creek	18
Mill Creek	23
<u>Chattooga River drainage</u>	
Addie Branch	28
Ammon's Branch	33
Bailey Branch.....	38
Billingsley Creek	43
Emory Branch	48
Gold Mine Branch.....	53
Harden Creek	58
Hedden Creek.....	63
Pounding Mill Creek.....	69
Ridley Branch	76
<u>Conasauga River drainage</u>	
Conasauga River.	81
Conasauga River (lower)	88
Sheeds Creek.....	93
Sheeds Creek Middle Fork.....	99
<u>Chattahoochee River drainage</u>	
Chattahoochee River	104
Jasus Creek.....	111
Low Gap Creek	117

List of Figures

Figure 1. Broad River drainage.....	11
Figure 2. Chattooga River drainage.....	12
Figure 3. Conasauga River drainage.....	13
Figure 4. Chattahoochee River drainage.....	14

Appendix A: habitat survey summaries

<u>Broad River drainage</u>	
Big Leatherwood Creek.....	19
Mill Creek.....	24
<u>Chattooga River drainage</u>	
Addie Branch.....	29
Ammon's Branch.....	34
Bailey Branch.....	39
Billingsley Creek.....	44
Emory Branch.....	49
Gold Mine Branch.....	54
Harden Creek.....	59
Hedden Creek.....	64
Pounding Mill Creek.....	70
Ridley Branch.....	77
<u>Conasauga River drainage</u>	
Conasauga River.....	82
Conasauga River (lower).....	89
Sheeds Creek.....	94
Sheeds Creek Middle Fork.....	100
<u>Chattahoochee River drainage</u>	
Chattahoochee River.....	105
Jasus Creek.....	112
Low Gap Creek.....	118

Appendix B: pebble count sumamries

<u>Broad River drainage</u>	
Big Leatherwood Creek.....	125
Mill Creek.....	126
<u>Chattooga River drainage</u>	
Addie Branch.....	126
Bailey Branch.....	127
Billingsley Creek.....	127
Gold Mine Branch.....	128
Harden Creek.....	128
Hedden Creek.....	129
Pounding Mill Creek.....	130

List of Figures (continued)

Ridley Branch	131
<u>Conasauga River drainage</u>	
Conasauga River (sites 1-6).....	132
Conasauga River (sites 7-9).....	133
Sheeds Creek (sites 1-6).....	134
Sheeds Creek (sites 7-8).....	135
Sheeds Creek Middle Fork.....	135

Introduction

During the summer of 2002, stream habitat surveys were conducted on 16 streams within the Chattahoochee-Oconee National Forest (CONF), one stream on private property adjacent to the CONF, and two streams (Sheeds Creek and Middle Fork Sheeds Creek) within the Cherokee National Forest (CNF) to quantify stream habitat attributes. Benthic macroinvertebrate samples were collected along the surveyed reaches to assess and monitor the biotic health of the stream. The section of the Conasauga River on private land was surveyed in cooperation with the Conasauga River Alliance and the information is included in this report. Two streams were located within the Broad River drainage (Figure 1), ten within the Chattooga River drainage (Figure 2), four within the Conasauga River drainage (Figure 3), and three within the Chattahoochee River drainage (Figure 4). The USFS Center for Aquatic Technology Transfer (CATT), by request of the CONF, provided training to habitat survey crews. Additional training for macroinvertebrate and pebble count methods was provided by CONF. Data were collected by employees of Americorp hired by the CONF.

Methods

Habitat Survey

A modified version of the two-stage basin-wide visual estimation technique (BVET) (Hankin and Reeves 1988, Dolloff et al. 1993) was used to inventory stream habitat. During the first stage, one crew member identified each habitat unit by type, estimated surface area, average and maximum depth, dominant and subdominant substrates (Table 1), and instream cover for each habitat unit, and estimated pool residual depth (average depth minus riffle crest depth), and the degree to which pool substrates were embedded. Habitat unit types included pools, glides, riffles, runs, and cascades (Table 2). Glides were grouped with pools for data analysis. Runs and cascades were grouped with riffles for data analysis. The length (0.1 m) of each habitat unit was measured with a hip chain and wetted width was visually estimated. Average depth of each habitat unit was estimated by taking depth measurements at various places across the channel profile with a graduated staff marked in 5 cm increments. Cover provided by rock, wood, and undercut banks was visually estimated in linear meters. Cover was defined as structure within the wetted channel under which a 15 cm long object could be hidden from overhead view. The

percent of the total substrate surface area that was embedded was visually estimated. Substrate was considered embedded if interstitial spaces around large substrate particles were filled by smaller substrate particles.

The second crew member classified and inventoried large woody debris (LWD) within the stream channel, determined the Rosgen's channel type for each habitat unit, estimated bank instability, and recorded data on a Husky Hunter data logger. LWD was divided into seven classes (Table 3). All woody debris less than 1 m long and less than 5 cm in diameter were omitted from the survey. Bank instability was estimated for both left and right banks. Bank instability was defined as the percent of the bank between the wetted channel and bankfull channel that consisted of erodible materials.

The first unit of each habitat type selected for intensive (second stage) sampling (i.e. accurate measurement of surface area) was determined randomly. Additional units were selected systematically (every 10th unit for each habitat type). The width of each systematically selected habitat unit was measured with a 30-m measuring tape at intervals ranging from about 1 m to 15 m. Interval size was determined by the length and the morphology of the unit (i.e. interval of measured width increased with increasing unit length). In each of the systematically selected riffles we also measured the bankfull stream channel width as described by Harrelson et al. (1994), and measured channel gradient with a clinometer. Surveys were terminated where the stream became intermittent (wetted channel width was less than 0.5 m). All surveys were conducted while wading upstream except the Conasauga River (lower) reach, which was surveyed from canoe.

The relationship between estimated surface area and measured surface area typically is strongly and positively correlated when the estimates are made by experienced personnel; thus we could correct visual estimates by multiplying them by a calibration ratio (Hankin and Reeves 1988). The calibration ratio, the estimated true total area, and the variance of the area estimator were calculated separately for each habitat type and each stream (or stream section if survey divided into separate reaches, for example lower and upper). BVET calculations were computed with a

Microsoft Excel spreadsheet using the formulas found in Dolloff et al. (1993). Data were summarized using Excel spreadsheets and SigmaPlot graphics software.

Macroinvertebrates

Macroinvertebrate samples were collected during the summer of 2002. Sample sites were randomly selected within the first kilometer of stream habitat survey section and subsequent sites were located at least once per kilometer thereafter except for the Conasauga River sites which were located once per two kilometers of stream survey section. No samples were collected at the Conasauga River (lower) reach.

Samples were collected by a two-person crew in a fast and slow riffle area using a 1-m² kick net with 500-micron mesh. One individual held the kick net tilted downstream and flush with the streambed. The other individual dislodged and washed all boulders, cobble, and LWD within a 1-m² area in front of the kick net. After the larger substrate were thoroughly washed the remaining sediment within the 1-m² area was disturbed by hand or feet in order to dislodge macroinvertebrates from the substrate. Samples from the fast and slow riffles areas were combined to form a composite sample for each site.

Pebble Counts

Pebble count data were collected using methods described in Whalen et al. (2002) to characterize the substrate composition of sample reaches. Pebble counts were performed by walking perpendicular transects within the bankfull channel (Harrelson et al. 1994). The person walking the transect (caller) began at the edge of the bankfull channel on one side of the stream and walked heel-to-toe across the stream channel to the opposite bank. At each step the caller picked up the pebble at the tip of their toe and measured its intermediate axis. This procedure was repeated until 100 pebbles were measured. Due to difficulty in measuring their intermediate axis, clay, silt, sand, and bedrock were placed into categories (Table 6). If detritus, LWD, or other organic materials were encountered, the rock substrate found directly below them was sampled. Pebble count data were collected once at every macroinvertebrate site. Pebble counts were not collected in the Emory Branch reach, the Conasauga River (lower) reach or the Chattahoochee River drainage reaches.

Results

Survey results are presented in the following appendices:

- A) Stream habitat survey summaries
- B) Particle size distribution from pebble count data
- C) Macroinvertebrate report, produced under supervision of Dr. Reese Voshell, included detailed sample and metric calculation results

Conclusion

The purpose of this report is to describe the current condition of CONF and CNF streams and their macroinvertebrate communities. Resource managers can use this information to evaluate overall stream condition and health and the effects of future management activities in forest watersheds.

Habitat characteristics of a particular section of surveyed stream can be compared to similar reaches within the same stream or used as a reference in other stream comparisons.

Macroinvertebrate communities can be monitored at the same sites over time or compared to similar stream reaches within the forests.

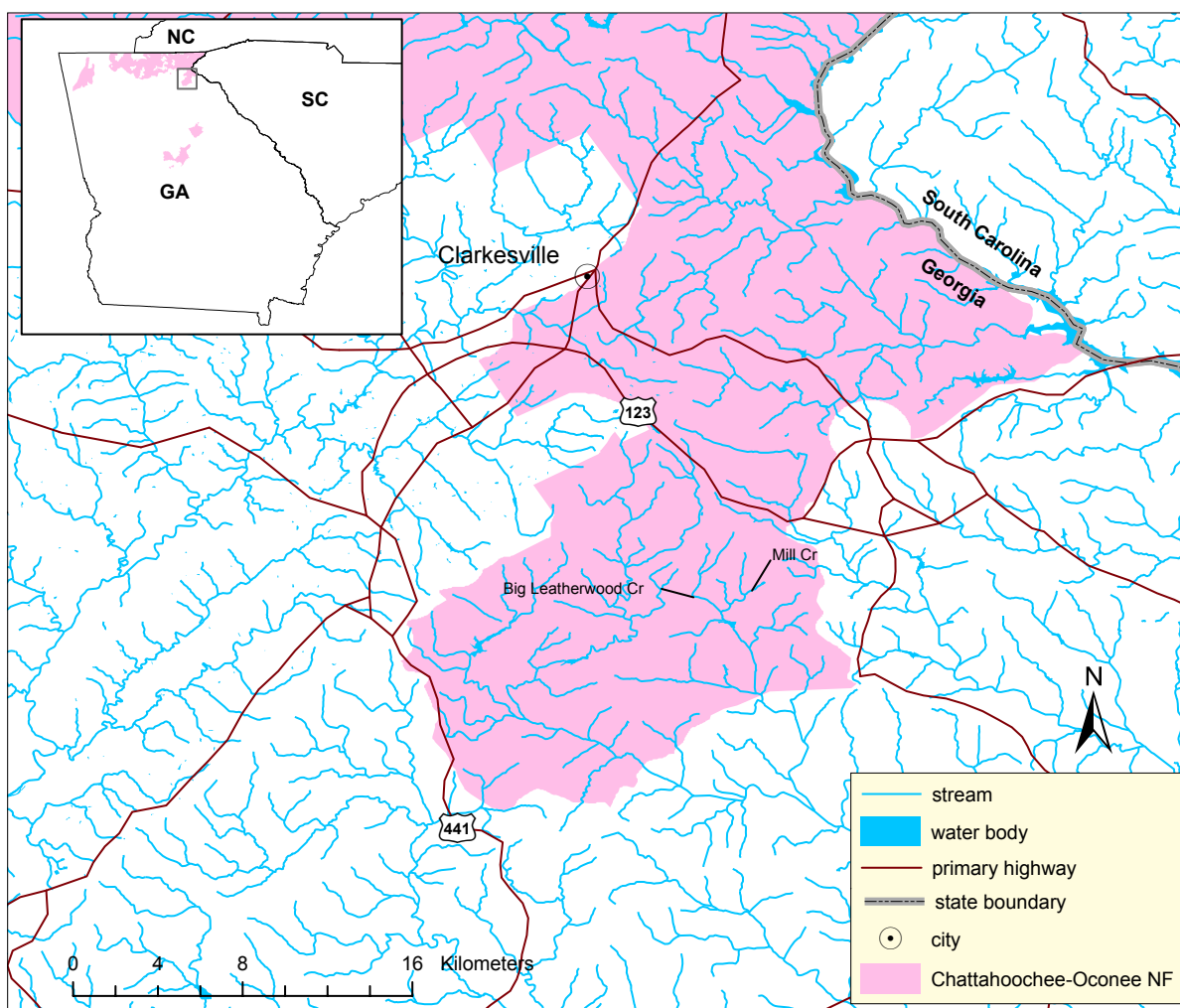


Figure 1. Map showing locations of streams surveyed in the Broad River drainage, 2002.

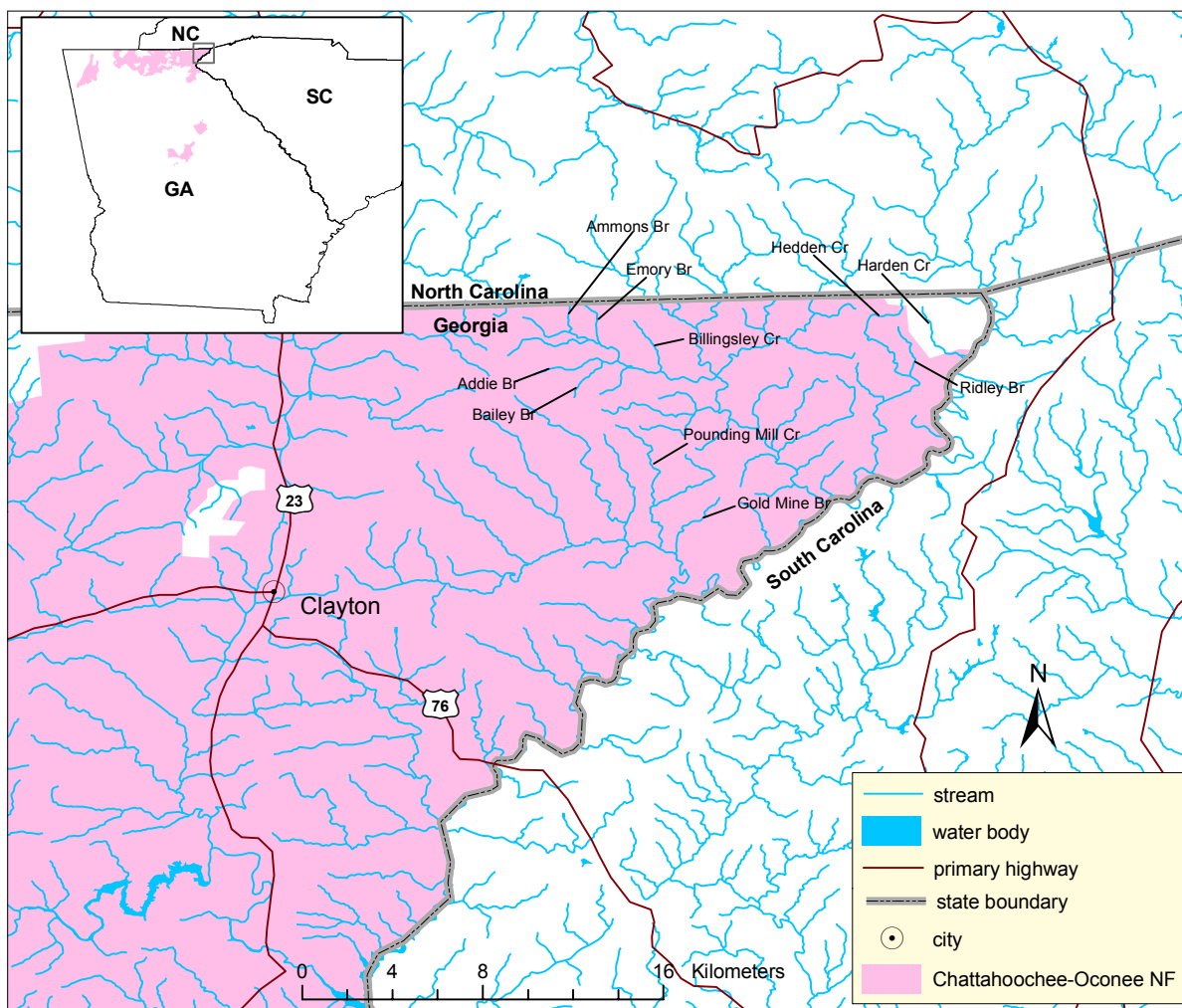


Figure 2. Map showing locations of streams surveyed in the Chattooga River drainage, 2002.

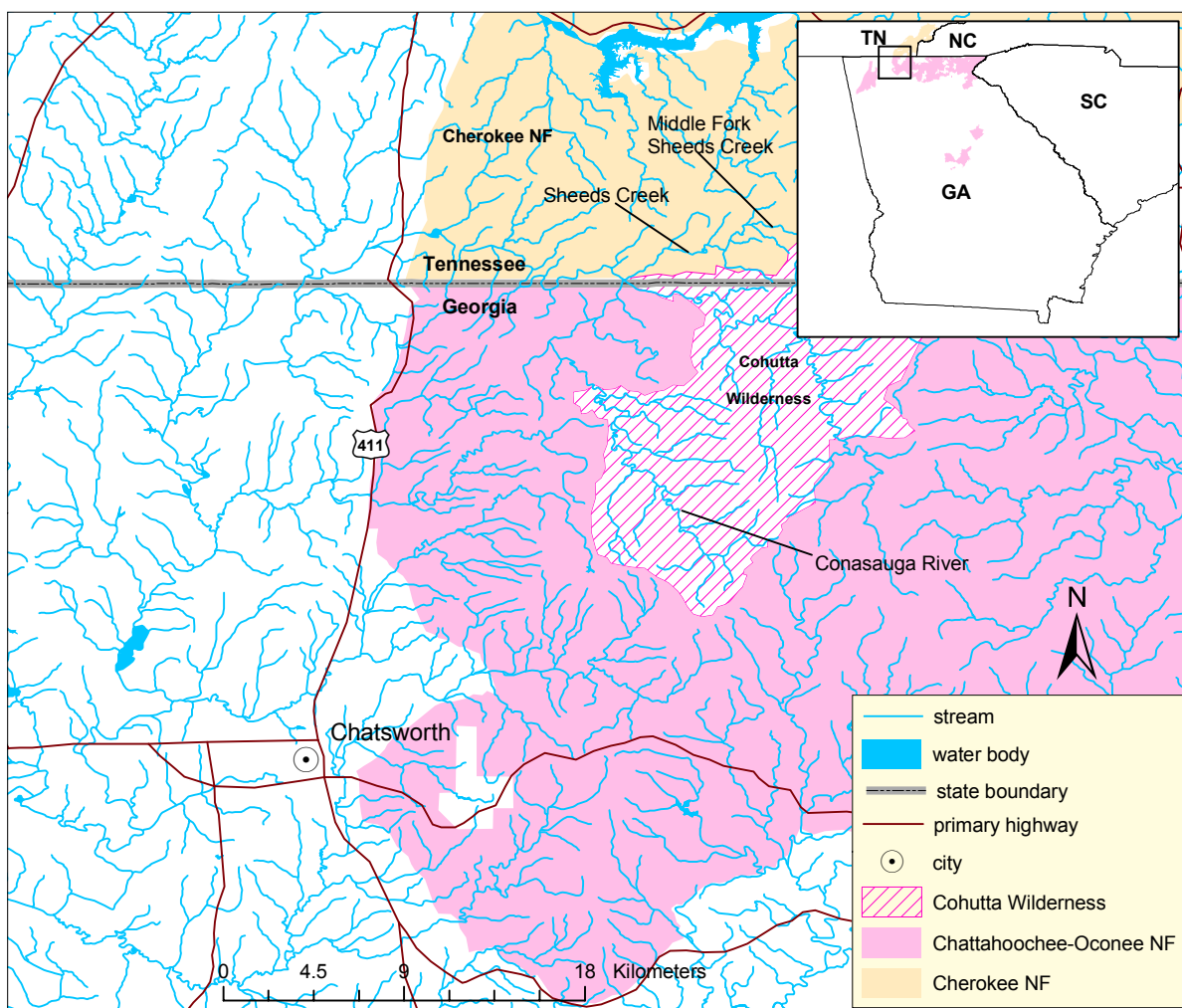


Figure 3. Map showing locations of streams surveyed in the Conasauga River drainage, 2002.

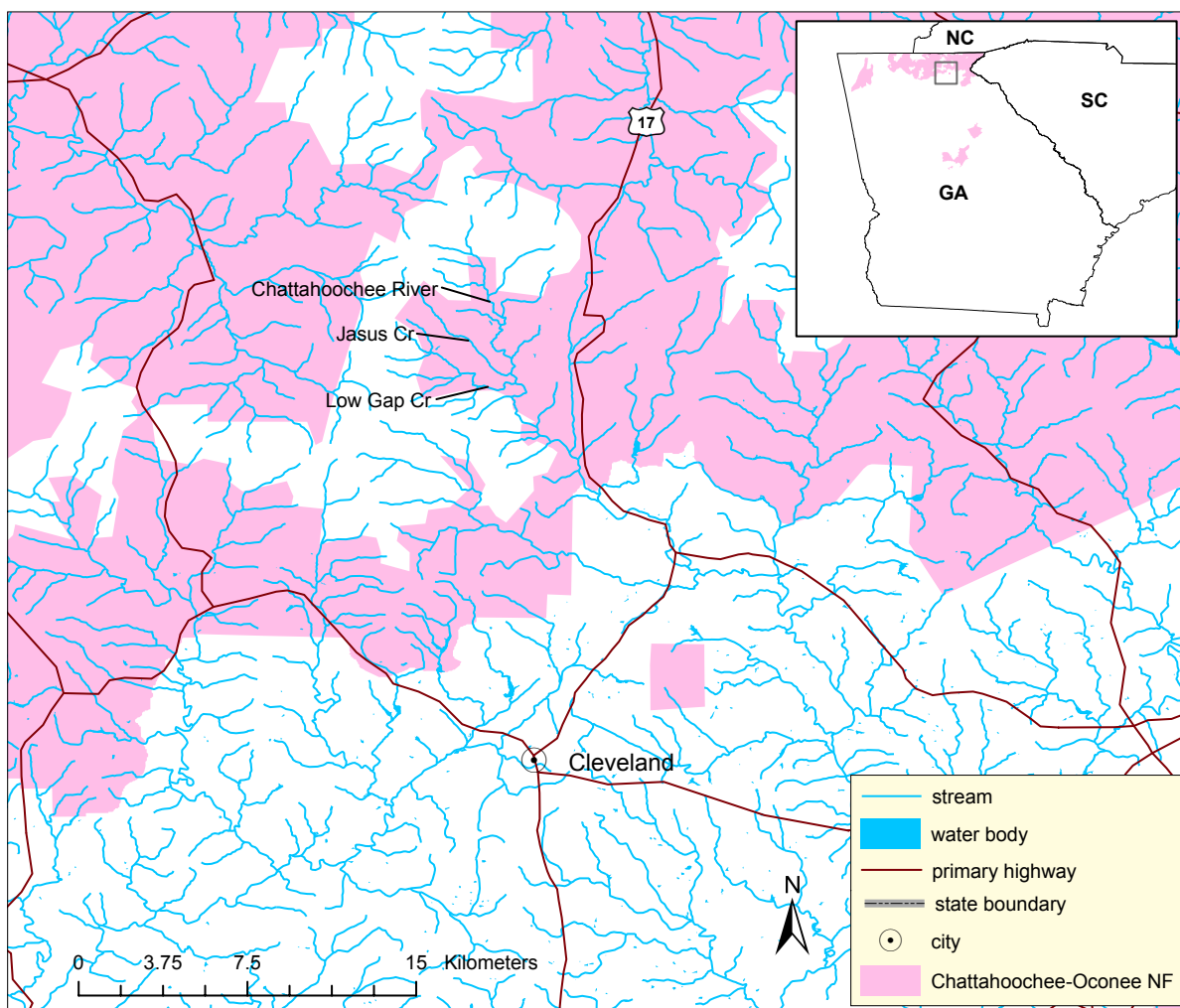


Figure 4. Map showing locations of streams surveyed in the Chattahoochee River drainage, 2002.

Table 1. Substrate size classes used during BVET habitat surveys based on modified Wentworth scale. Diameter was visually estimated for the intermediate axis.

Size Class	Name	Size (mm)	Description
1	Organic	--	Dead organic matter, leaves, detritus, etc.
2	Clay	< 0.00024	Sticky
3	Silt	0.00024-0.0039	Slippery
4	Sand	0.0039-2	Gritty
5	Small Gravel	3-16	Sand to thumbnail
6	Large Gravel	17-64	Thumbnail to fist
7	Cobble	65-256	Fist to head
8	Boulder	>256	Larger than head
9	Bedrock	--	Solid parent material

Table 2. Description of habitat types used during BVET habitat surveys, modified from Armantrout (1998).

Habitat Type	Stream Bed Profile	Gradient (%)	Surface Turbulence	Water Velocity
Pool	concave	<1	none	low
Glide	flat	<1	none	low
Run	flat	>1	low to none	high
Riffle	convex	>1	moderate to high	high
Cascade	convex	>12%	very high	very high

Table 3. Large woody debris (LWD) size classes used during BVET habitat surveys. Diameter was measured at thickest portion of LWD piece. All woody debris less than 1 m long and less than 5 cm in diameter were omitted from the survey.

Size Class	Length (m)	Diameter (cm)
1	< 5	5 – 10
2	< 5	10 – 50
3	< 5	> 50
4	> 5	5 – 10
5	> 5	10 – 50
6	> 5	> 50
7	rootwad	rootwad

Table 4. Substrate size classes used during pebble count survey data analysis. Diameter was measured on the intermediate axis.

Size Class	Diameter (mm)
Clay	< 0.002
Silt	0.002 – 0.05
Sand	0.05 – 2
small gravel	3 – 8
large gravel	9 – 64
small cobble	65 – 128
large cobble	129 – 256
small boulder	257 – 512
medium boulder	513 – 1024
large boulder	> 1024
bedrock	solid parent material

Literature Cited

- Armantrout, N. B., compiler. 1998. Glossary of aquatic habitat inventory terminology. American Fisheries Society, Bethesda, Maryland.
- Barbour, M. T., J. Gerritsen, B. D. Snyder, and J. B. Stribling. 1999. Rapid Bioassessment Protocols for Use in Streams and Wadeable Rivers: Periphyton, Benthic Macroinvertebrates and Fish, Second Edition. EPA 841-B-99-002. U.S. Environmental Protection Agency; Office of Water; Washington, D.C
- Dolloff, C. A., D. G. Hankin, and G. H. Reeves. 1993. Basinwide estimation of habitat and fish populations in streams. U.S. Forest Service General Technical Report SE-83.
- Hankin, D. G., and G. H. Reeves. 1988. Estimating total fish abundance and total habitat area in small streams based on visual estimation methods. Canadian Journal of Fisheries and Aquatic Sciences 45:834-844.
- Harrelson, Cheryl C., Rawlins, C. L., and Potyondy, John P. 1994. Stream channel reference sites: an illustrated guide to field technique. Gen. Tech. Rep. RM-245. Fort Collins, CO: U.S. Department of Agriculture, Forest Service, Rocky Mountain Forest and Range Experiment Station. 61p.
- Rosgen, D. L. 1996. Applied River Morphology. Wildland Hydrology Books, Pagosa Springs, Colorado.
- Whalen, J. K., C. N. Roghair, D. R. Nuckols, J. D. Moran, and C. A. Dolloff. 2002. Comparison of stream habitat, macroinvertebrate community, stream sediment, and channel condition data collection methodologies in the Chattooga River watershed, Chattahoochee National Forest, Georgia. Unpublished File Report. Blacksburg, VA: U.S. Department of Agriculture, Southern Research Station, Center for Aquatic Technology Transfer.

Appendix A: Habitat Survey Summaries

Table A1. Stream habitat survey summary for Big Leatherwood Creek, 2002.

Stream:	Big Leatherwood Creek
District:	Chattooga
USGS Quadrangle:	Lake Russell/Ayersville
Survey Date:	06/15/02
Downstream Starting Point:	USFS Boundary
Total Distance Surveyed (km):	5.8

	Pools	Riffles
Percent of Total Stream Area:	69	31
Number:	320	262
Number per km:	55	45
Total Area (m ²):	10679±1108	4726±748
Mean Area (m ²):	33	18
Correction Factor:	1.00	1.27
# of Paired Samples:	30	27
Mean Maximum Depth (cm):	28	11
Mean Average Depth (cm):	14	6
Mean Residual Pool Depth (cm):	8	--
% of Pool Habitat Surveyed as Glides:	0.0	--
% of Riffle Habitat Surveyed as Runs:	--	0.4
% of Riffle Habitat Surveyed as Cascades:	--	7.3
% Pools with > 35% Embeddedness:	100	--

Large Woody Debris Size	Pieces per km
< 5 m long, 5 cm – 10 cm diameter:	47
< 5 m long, 11-50 cm diameter:	49
< 5 m long, >50 cm diameter:	25
> 5 m long, 5 cm – 10 cm diameter:	12
> 5 m long, 11-50 cm diameter:	17
> 5 m long, >50 cm diameter:	10
Rootwads:	6
Total:	165

Riparian Width	Total Width* (m)	Left & Right Width** (m)
Mean	3	0
Maximum	5	3
75 th Percentile	4	0
25 th Percentile	2	0
Minimum	1	0

*Left riparian, right riparian, and bankfull channel widths were added together for calculations

**Left and right riparian widths were grouped (not added) together for calculations

Other Stream Attributes	
Mean Bankfull Channel Width (m):	3
Mean Channel Gradient (%):	4

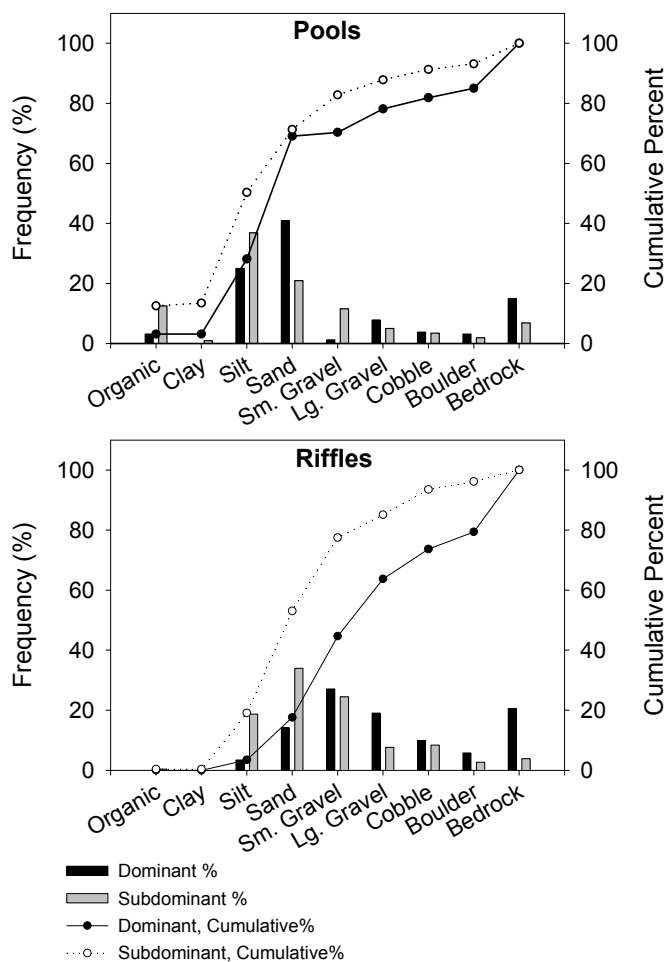


Figure A1. Frequency (percent) and cumulative percent of dominant and subdominant substrate occurrence for pools and riffles in Big Leatherwood Creek, summer 2002.

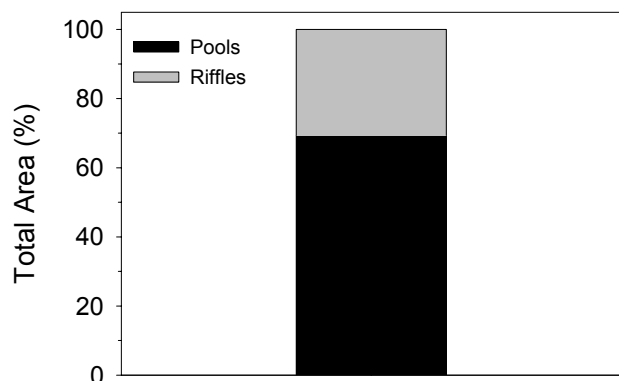


Figure A2. Estimated area of Big Leatherwood Creek in pools and riffles as calculated using BVET techniques, summer 2002.

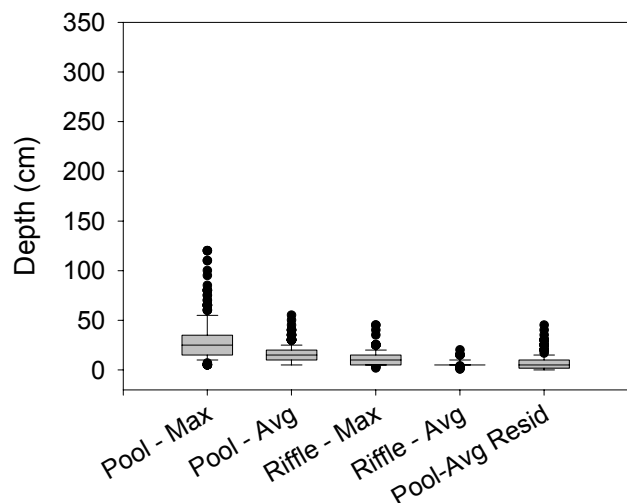


Figure A3. Maximum and average depths and residual pool depths for pools and riffles in Big Leatherwood Creek, summer 2002. The top and bottom of the boxes represent the 25th and 75th percentiles, the bar in the center of the box represents the median, whiskers represent the 10th and 90th percentiles, and closed circles represent the entire range of the data.

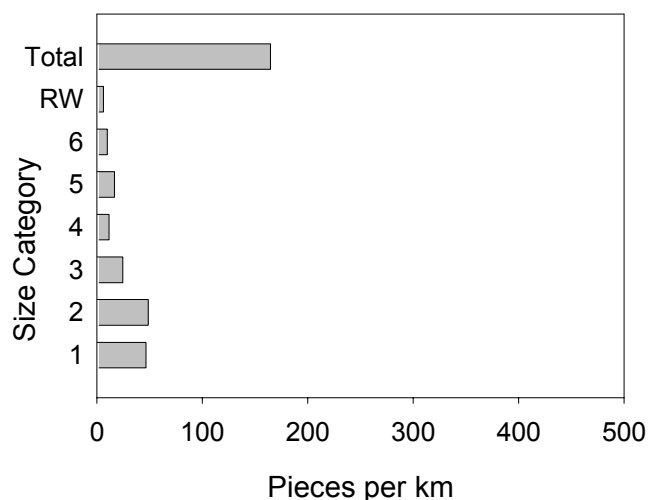


Figure A4. LWD per kilometer in Big Leatherwood Creek, summer 2002

Table A2. Stream features found on Big Leatherwood Creek during BVET habitat survey, summer 2002.
Distance is meters from start of survey.

Stream Feature	Distance (m)	Width (m)	Comments
Tributary	58.6	0.5	on right
Bug sample site 1	296.7		in Riffle 6
Tributary	422.9	0.5	on left
Tributary	590.1	0.5	on right
Tributary	952.7	4.0	on right, Mill Creek
Tributary	1076.9	0.3	
Tributary	1269.9	0.5	on left, dry
Bug sample site 2	1287.0		in habitat unit R22
Tributary	1319.0	0.3	on left
Side Channel In	1412.0	1.0	Right
Side Channel Out	1416.7	1.0	Right
Side Channel In	1439.0	0.8	Left
Side Channel Out	1443.6	0.8	Left
Tributary	1471.6	0.5	on right, dry
Tributary	1515.6	1.5	on left, dry
Tributary	1648.6	0.8	on right
Tributary	1840.6	2.0	on right
Seep	1998.7		on left
Waterfall	2097.0		1 m tall
Waterfall	2119.8		1 m tall
Tributary	2249.9	0.5	on left
Bug sample site 3	2291.0		in habitat unit R76
Bug sample site 4	2386.0		in habitat unit P108
Tributary	2423.4	1.5	on right, almost dry
Tributary	2594.4	0.5	on left
Tributary	2626.0	0.5	on right, almost dry
Tributary	2982.9	0.5	on left
Tributary	3053.0	2.0	on left
Seep	3240.4		on right
Tributary	3463.3	0.8	on left, dry
Tributary	3485.7		on right
Tributary	3586.1	1.0	on right
Waterfall	3674.0		15 m tall
Other	4231.3		dry drainage channel
Bug sample site 5	4287.0		in habitat unit R158
Tributary	4690.0	0.5	on left, creating island
Seep	4696.7		on left, caused by tributary
Tributary	4938.4	0.3	on right, dry
Culvert	4994.3		old road crossing, blocked by debris jam
Underground	4997.1		caused by blockage of culvert and buildup of sediment, from 4993.4 to 4997.1
Tributary	5032.8	0.3	on right, dry
Tributary	5084.5	0.5	on left
Bug sample site 6	5277.0		in habitat unit R228
Seep	5644.0		on right, dry
Underground	5708.7		from 5698.1 to 5708.7
Underground	5734.5		from 5721.6 to 5734.5
Underground	5768.2		from 5766.9 to 5768.2

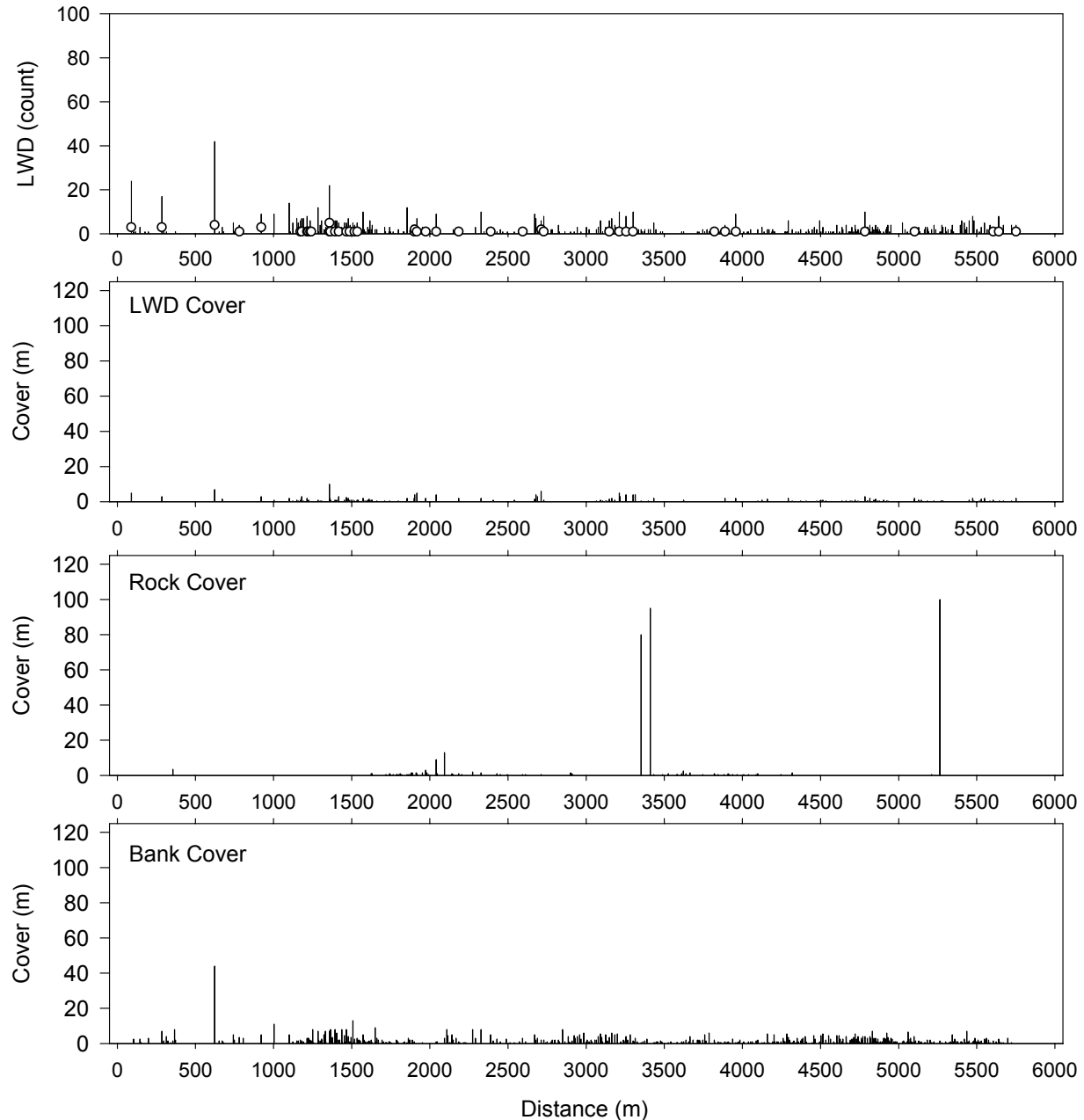


Figure A5. Distribution and abundance of LWD, and distribution of LWD, rock, and bank cover in Big Leatherwood Creek, summer 2002. LWD and cover were recorded for each habitat unit in the stream. Distance is meters upstream of USFS Boundary.

LWD distribution and abundance: Vertical bars indicate total count of LWD. Open circles represent the amount of the total LWD that was >5 m in length, >50 cm in diameter (size 6).

LWD, rock, and bank cover: Cover was defined as linear meters of the cover type within the wetted channel under which a 15 cm long object could be hidden from overhead view. Vertical bars indicate amount of cover in linear meters.

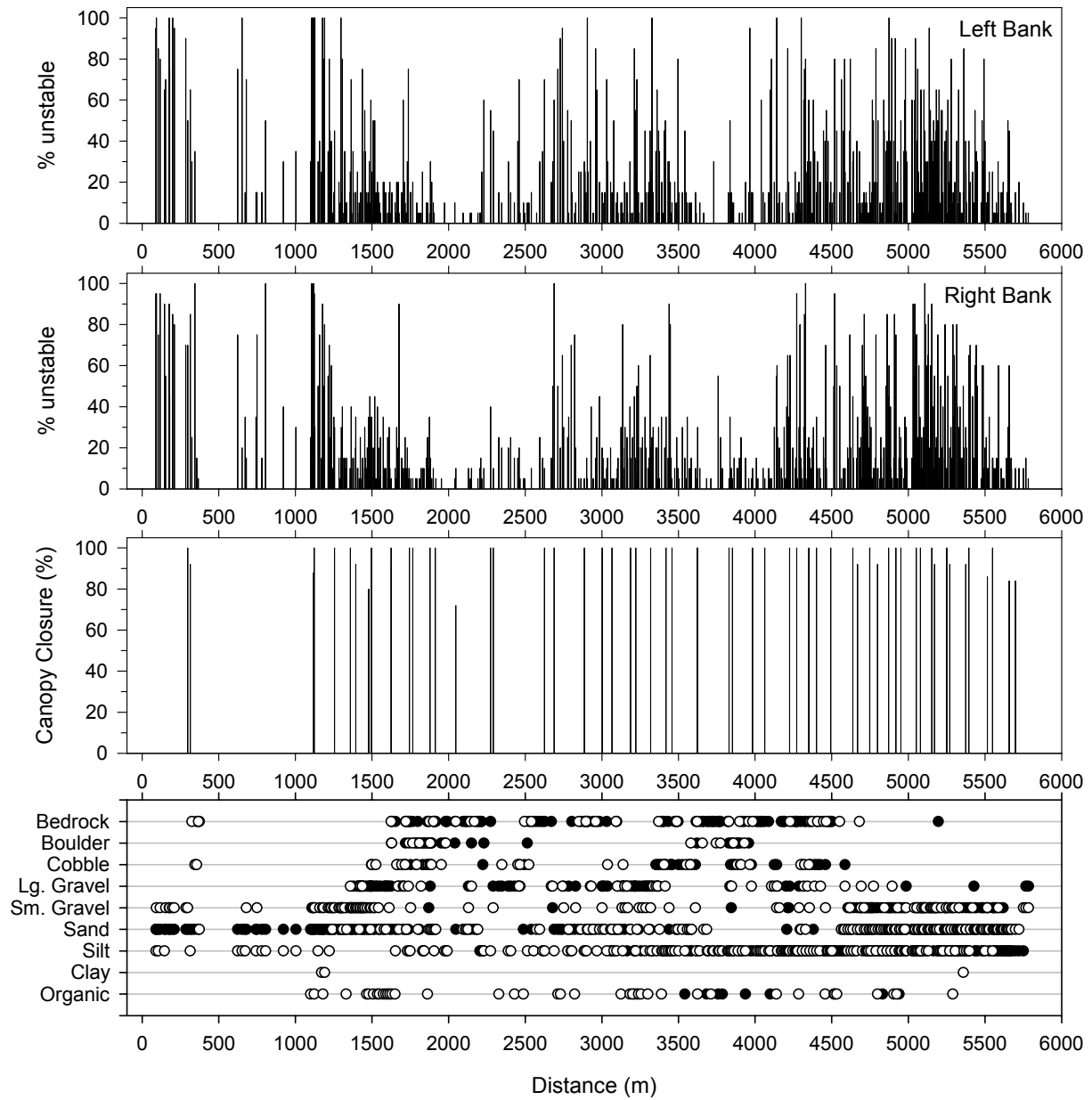


Figure A6. Bank stability, canopy closure and substrate distribution in Big Leatherwood Creek, summer 2002. Bank stability and substrate were recorded for each habitat unit in the stream. Canopy closure was measured where paired samples were recorded. Distance is meters upstream of USFS Boundary.

Bank stability: Left and right bank were recorded as looking upstream. Vertical bars indicate percent of bank identified as unstable.

Canopy closure: Vertical bars indicate percent of canopy closure.

Substrate distribution: Closed circles indicate dominant substrate type, open circles indicate subdominant substrate type.

Table A3. Stream habitat survey summary for Mill Creek, 2002.

Stream:	Mill Creek
District:	Chattooga
USGS Quadrangle:	Ayersville
Survey Date:	06/28/02
Downstream Starting Point:	Confluence with Big Leatherwood Creek
Total Distance Surveyed (km):	1.7

	Pools	Riffles
Percent of Total Stream Area:	89	11
Number:	84	56
Number per km:	49	33
Total Area (m ²):	4991±660	637±266
Mean Area (m ²):	59	11
Correction Factor:	1.11	0.84
# of Paired Samples:	8	5
Mean Maximum Depth (cm):	33	10
Mean Average Depth (cm):	15	5
Mean Residual Pool Depth (cm):	6	--
% of Pool Habitat Surveyed as Glides:	0.0	--
% of Riffle Habitat Surveyed as Runs:	--	0.0
% of Riffle Habitat Surveyed as Cascades:	--	7.1
% Pools with > 35% Embeddedness:	100	--

Large Woody Debris Size	Pieces per km
< 5 m long, 5 cm – 10 cm diameter:	37
< 5 m long, 11-50 cm diameter:	33
< 5 m long, >50 cm diameter:	16
> 5 m long, 5 cm – 10 cm diameter:	10
> 5 m long, 11-50 cm diameter:	17
> 5 m long, >50 cm diameter:	16
Rootwads:	6
Total:	135

Riparian Width	Total Width* (m)	Left & Right Width** (m)
Mean	4	1
Maximum	6	3
75 th Percentile	5	1
25 th Percentile	3	0
Minimum	3	0

*Left riparian, right riparian, and bankfull channel widths were added together for calculations

**Left and right riparian widths were grouped (not added) together for calculations

Other Stream Attributes	
Mean Bankfull Channel Width (m):	3
Mean Channel Gradient (%):	3

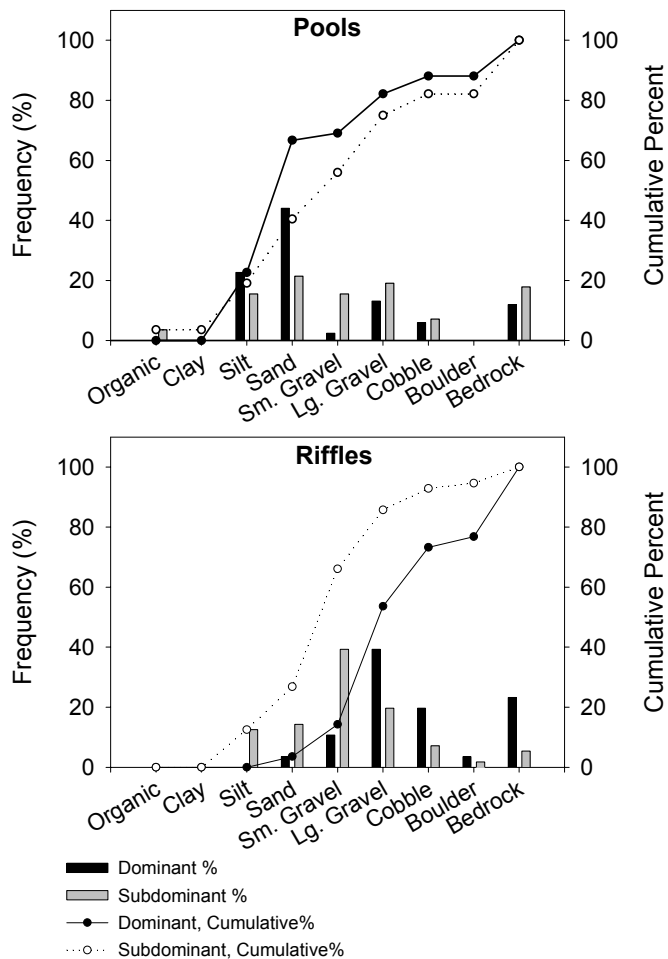


Figure A7. Frequency (percent) and cumulative percent of dominant and subdominant substrate occurrence for pools and riffles in Mill Creek, summer 2002.

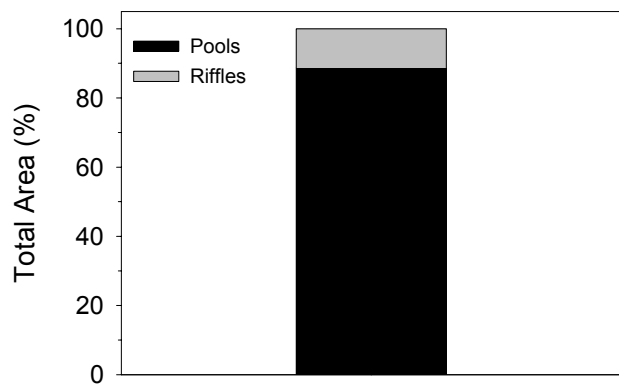


Figure A8. Estimated area of Mill Creek in pools and riffles as calculated using BVET techniques, summer 2002.

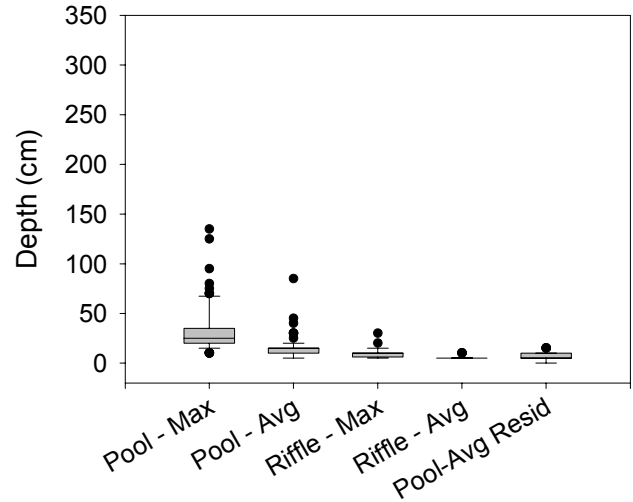


Figure A9. Maximum and average depths and residual pool depths for pools and riffles in Mill Creek, summer 2002. The top and bottom of the boxes represent the 25th and 75th percentiles, the bar in the center of the box represents the median, whiskers represent the 10th and 90th percentiles, and closed circles represent the entire range of the data.

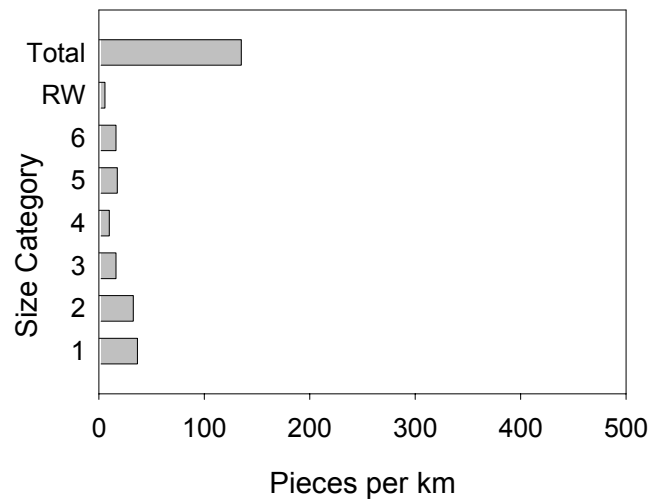


Figure A10. LWD per kilometer in Mill Creek, summer 2002.

Table A4. Stream features found on Mill Creek during BVET habitat survey, summer 2002. Distance is meters from start of survey.

Stream Feature	Distance (m)	Width (m)	Comments
Tributary	482.2	1.0	on right, dry
Tributary	527.6	1.5	on left
Bug sample site 1	818.7		in habitat unit R26
Seep	921.6	1.5	on right
Culvert	1022.8		road crossing
Tributary	1024.6	0.5	on right, dry
Tributary	1303.4	2.0	on left
Tributary	1525.5	0.5	on left, dry
Seep	1562.0		on right

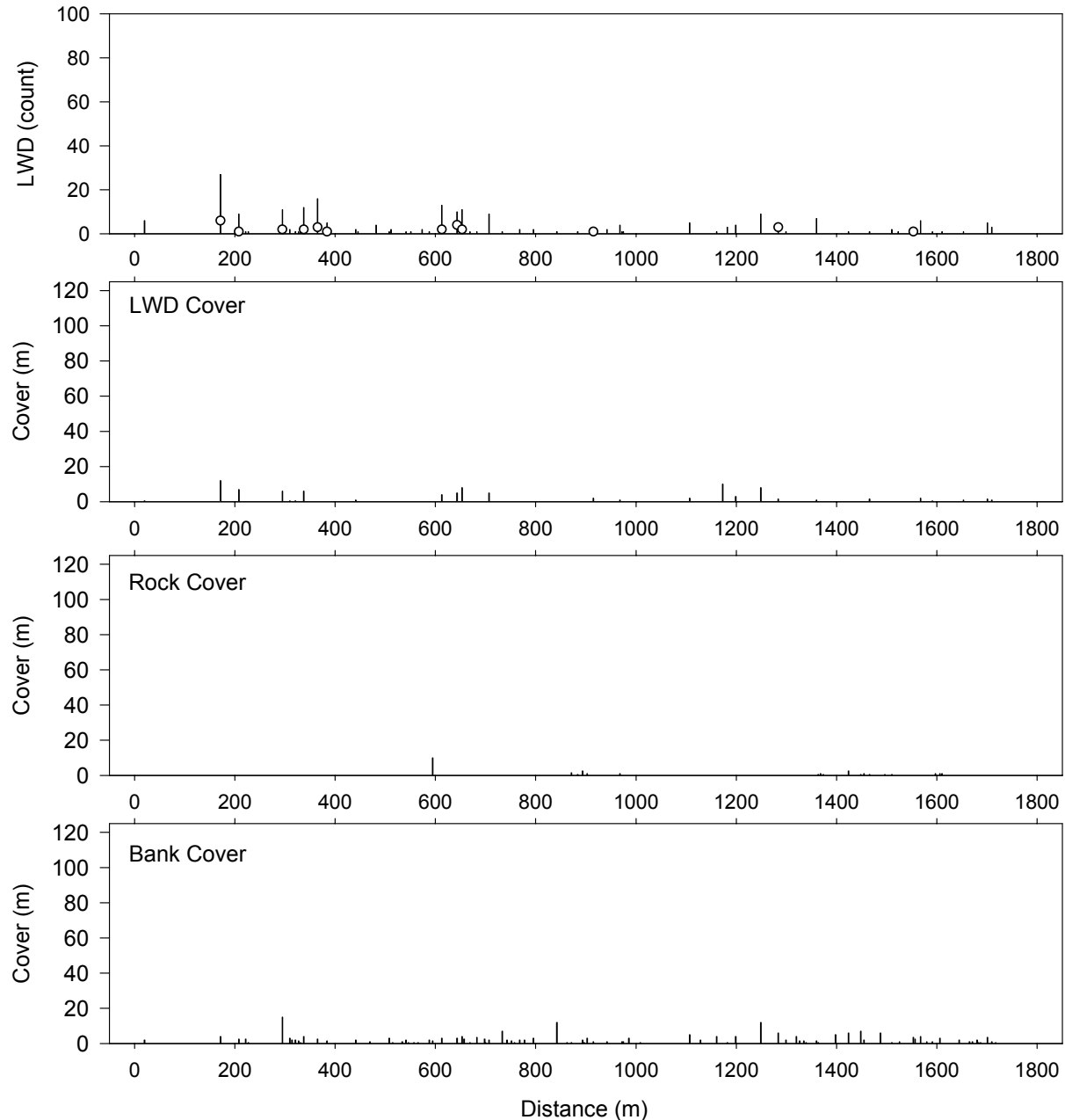


Figure A11. Distribution and abundance of LWD, and distribution of LWD, rock, and bank cover in Mill Creek, summer 2002. LWD and cover were recorded for each habitat unit in the stream. Distance is meters upstream of confluence with Big Leatherwood Creek.

LWD distribution and abundance: Vertical bars indicate total count of LWD. Open circles represent the amount of the total LWD that was >5 m in length, >50 cm in diameter (size 6).

LWD, rock, and bank cover: Cover was defined as linear meters of the cover type within the wetted channel under which a 15 cm long object could be hidden from overhead view. Vertical bars indicate amount of cover in linear meters.

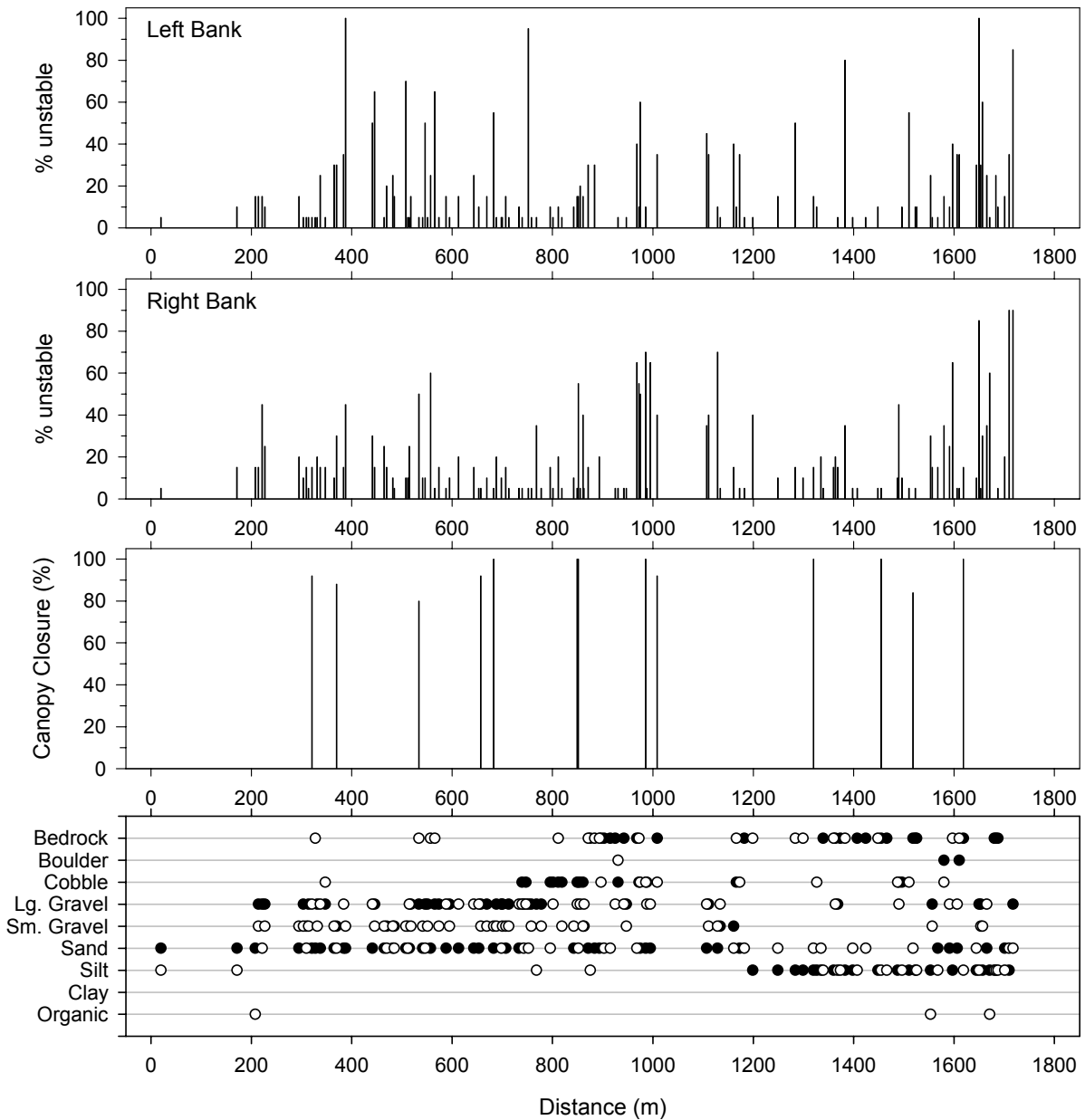


Figure A12. Bank stability, canopy closure and substrate distribution in Mill Creek, summer 2002. Bank stability and substrate were recorded for each habitat unit in the stream. Canopy closure was measured where paired samples were recorded. Distance is meters upstream of confluence with Big Leatherwood Creek.

Bank stability: Left and right bank were recorded as looking upstream. Vertical bars indicate percent of bank identified as unstable.

Canopy closure: Vertical bars indicate percent of canopy closure.

Substrate distribution: Closed circles indicate dominant substrate type, open circles indicate subdominant substrate type.

Table A5. Stream habitat survey summary for Addie Branch, 2002.

Stream:	Addie Branch
District:	Tallulah
USGS Quadrangle:	Rabun Bald
Survey Date:	05/21/02
Downstream Starting Point:	Confluence with Holcomb Creek
Total Distance Surveyed (km):	2.9

	Pools	Riffles
Percent of Total Stream Area:	38	62
Number:	121	105
Number per km:	41	36
Total Area (m ²):	4854±938	7789±2567
Mean Area (m ²):	40	74
Correction Factor:	1.05	1.05
# of Paired Samples:	12	10
Mean Maximum Depth (cm):	61	36
Mean Average Depth (cm):	34	18
Mean Residual Pool Depth (cm):	15	--
% of Pool Habitat Surveyed as Glides:	3	--
% of Riffle Habitat Surveyed as Runs:	--	1.0
% of Riffle Habitat Surveyed as Cascades:	--	28.6
% Pools with > 35% Embeddedness:	89	--

Large Woody Debris Size	Pieces per km
< 5 m long, 5 cm – 10 cm diameter:	173
< 5 m long, 11-50 cm diameter:	134
< 5 m long, >50 cm diameter:	44
> 5 m long, 5 cm – 10 cm diameter:	47
> 5 m long, 11-50 cm diameter:	53
> 5 m long, >50 cm diameter:	44
Rootwads:	2
Total:	498

Riparian Width	Total Width* (m)	Left & Right Width** (m)
Mean	19	3
Maximum	83	35
75 th Percentile	12	2
25 th Percentile	7	0
Minimum	5	0

*Left riparian, right riparian, and bankfull channel widths were added together for calculations

**Left and right riparian widths were grouped (not added) together for calculations

Other Stream Attributes	
Mean Bankfull Channel Width (m):	14
Mean Channel Gradient (%):	8

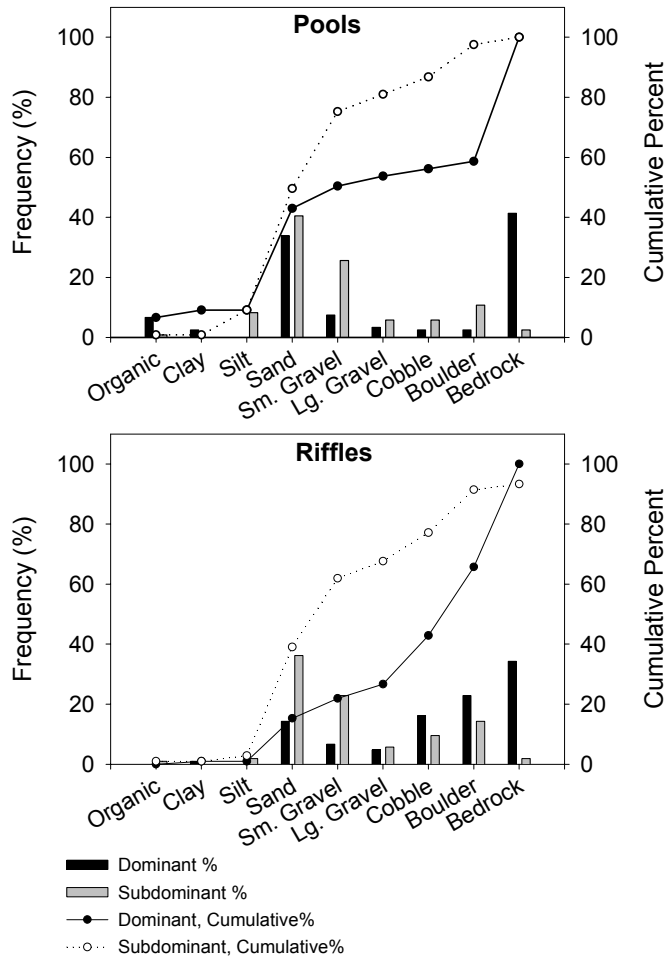


Figure A13. Frequency (percent) and cumulative percent of dominant and subdominant substrate occurrence for pools and riffles in Addie Branch, summer 2002.

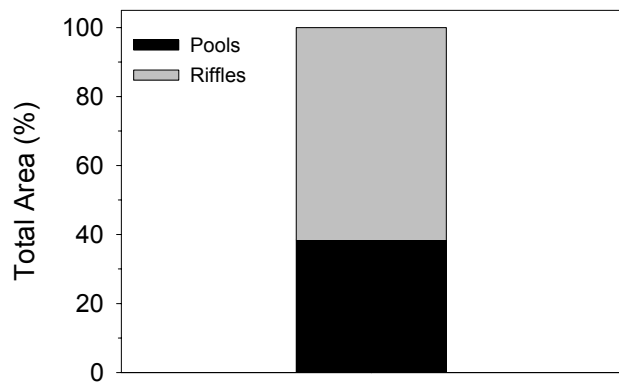


Figure A14. Estimated area of Addie Branch in pools and riffles as calculated using BVET techniques, summer 2002.

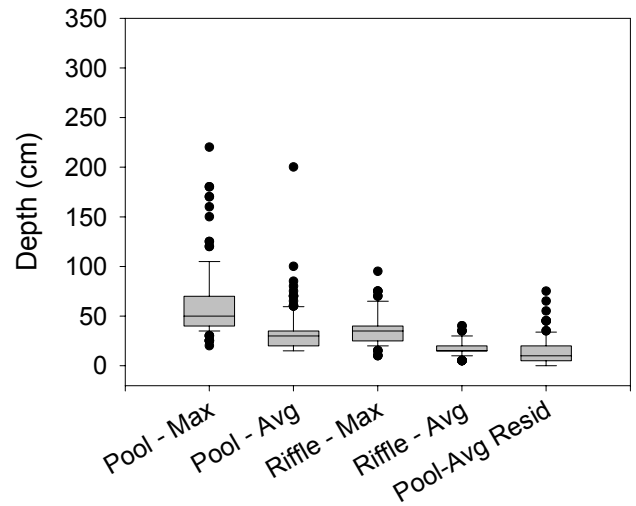


Figure A15. Maximum and average depths and residual pool depths for pools and riffles in Addie Branch, summer 2002. The top and bottom of the boxes represent the 25th and 75th percentiles, the bar in the center of the box represents the median, whiskers represent the 10th and 90th percentiles, and closed circles represent the entire range of the data.

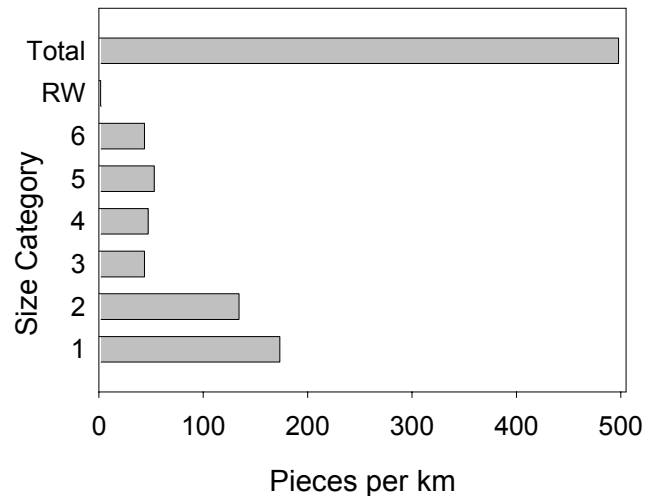


Figure A16. LWD per kilometer in Addie Branch, summer 2002.

Table A6. Stream features found on Addie Branch during BVET habitat survey, summer 2002. Distance is meters from start of survey.

Stream Feature	Distance (m)	Width (m)	Comments
Waterfall	111.4		3 m tall
Culvert	181.1		4 m tall corrugated metal overflow of road
Waterfall	271.2		5 m tall
Bug sample site 1	317.4		
Side Channel In	526.5	1.5	on left
Tributary	560.7	1.0	on left
Tributary	567.0	2.0	on left
Tributary	891.7	1.5	on right, very silted
Waterfall	992.8		7 m tall
Waterfall	1048.5		6 m tall
Tributary	1112.4	4.0	on right, trickling
Bug sample site 2	1315.9		
Tributary	1377.0	2.0	on right
Tributary	1501.9	1.0	on right
Culvert	1733.0		6 m long on Natural Bottom Hale Ridge Road
Tributary	1982.0	0.3	on left
Tributary	2062.9	0.2	on right causing bank erosion
Tributary	2166.3	1.5	on right
Side Channel In	2190.0	4.0	on left
Side Channel Out	2319.8	2.0	on left
Bug sample site 3	2320.0		
Tributary	2408.9	1.0	on left
Tributary	2563.0	0.1	on right trickling over bedrock
Tributary	2622.9	2.0	on right small waterfall
Waterfall	2693.0		5 m tall, stream inaccessible due to steep cascades/waterfalls and steep bedrock banks walked around approx 100 m of stream
Tributary	2841.0	0.2	on right, trickling
Waterfall	2901.0		3 m tall
Tributary	2916.0	0.5	on left

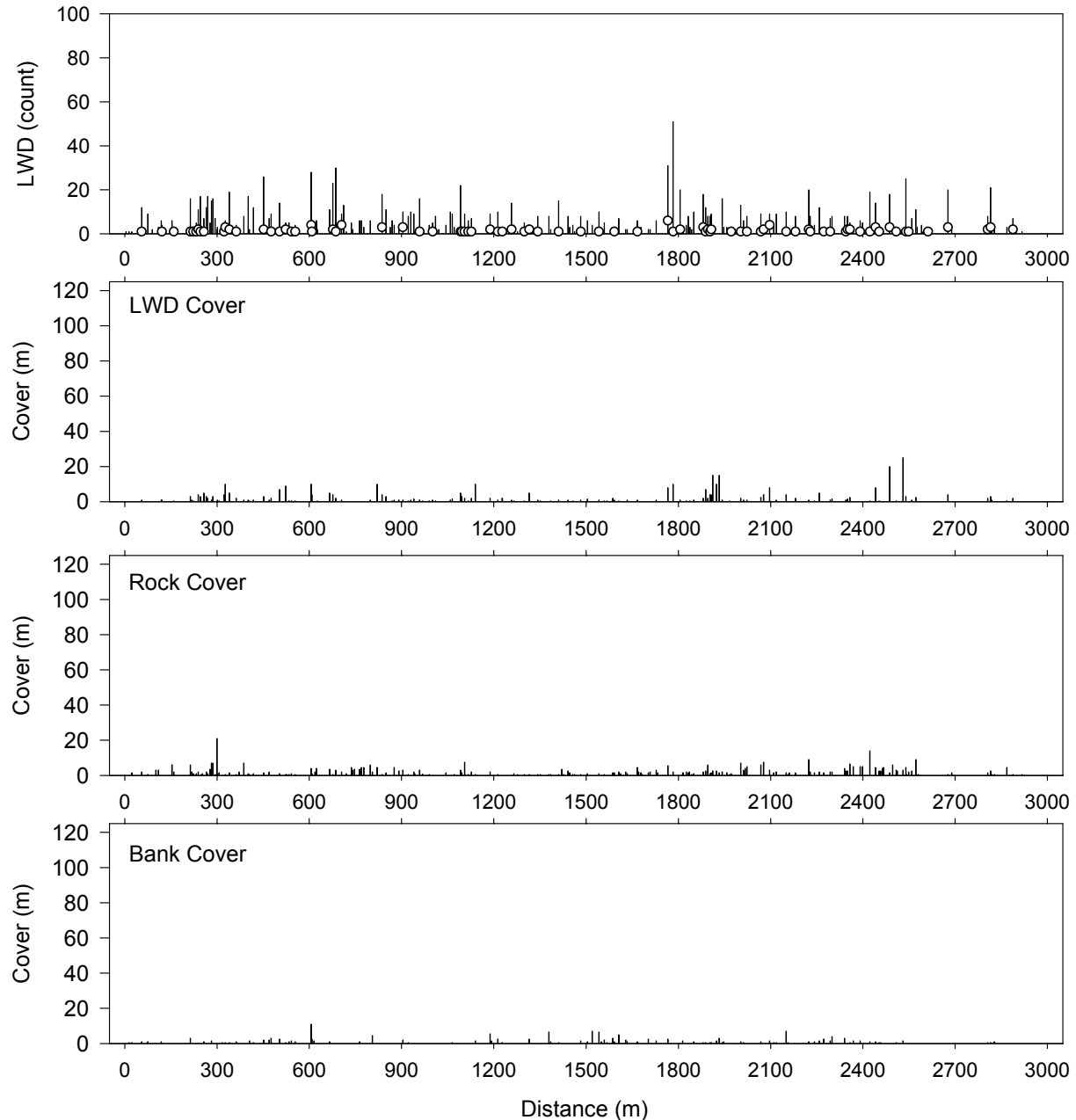


Figure A17. Distribution and abundance of LWD, and distribution of LWD, rock, and bank cover in Addie Branch, summer 2002. LWD and cover were recorded for each habitat unit in the stream. Distance is meters upstream of confluence with Holcomb Creek.

LWD distribution and abundance: Vertical bars indicate total count of LWD. Open circles represent the amount of the total LWD that was >5 m in length, >50 cm in diameter (size 6).

LWD, rock, and bank cover: Cover was defined as linear meters of the cover type within the wetted channel under which a 15 cm long object could be hidden from overhead view. Vertical bars indicate amount of cover in linear meters.

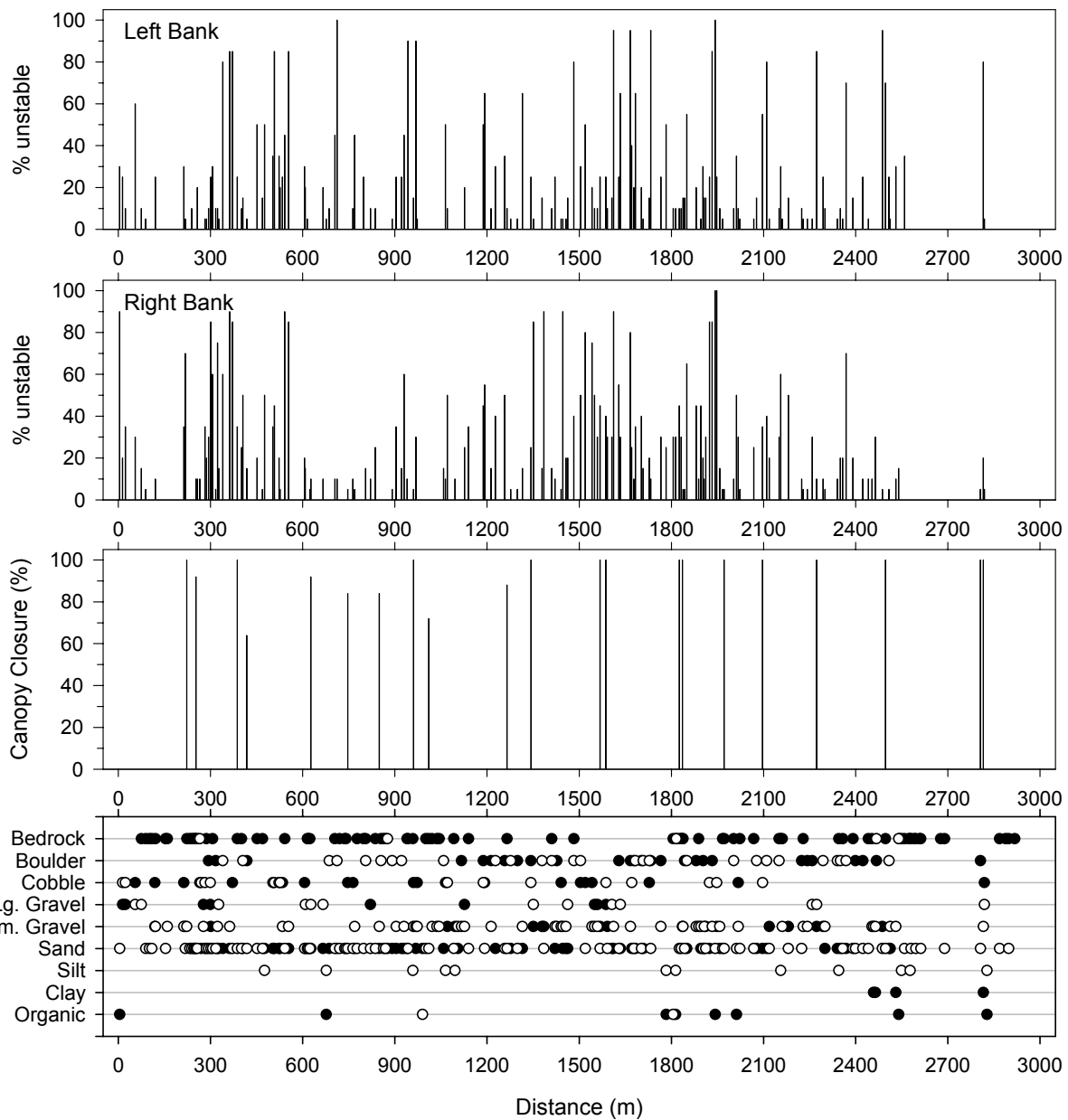


Figure A18. Bank stability, canopy closure and substrate distribution in Addie Branch, summer 2002. Bank stability and substrate were recorded for each habitat unit in the stream. Canopy closure was measured where paired samples were recorded. Distance is meters upstream of confluence with Holcomb Creek.

Bank stability: Left and right bank were recorded as looking upstream. Vertical bars indicate percent of bank identified as unstable.

Canopy closure: Vertical bars indicate percent of canopy closure.

Substrate distribution: Closed circles indicate dominant substrate type, open circles indicate subdominant substrate type.

Table A7. Stream habitat survey summary for Ammon's Branch, 2002.

Stream:	Ammon's Branch
District:	Tallulah
USGS Quadrangle:	Rabun Bald
Survey Date:	06/03/02
Downstream Starting Point:	Confluence with Holcomb Creek
Total Distance Surveyed (km):	2.9

	Pools	Riffles
Percent of Total Stream Area:	39	61
Number:	154	142
Number per km:	53	48
Total Area (m ²):	3303±520	5101±300
Mean Area (m ²):	21	36
Correction Factor:	0.90	0.91
# of Paired Samples:	16	14
Mean Maximum Depth (cm):	37	24
Mean Average Depth (cm):	18	12
Mean Residual Pool Depth (cm):	7	--
% of Pool Habitat Surveyed as Glides:	0	--
% of Riffle Habitat Surveyed as Runs:	--	6.3
% of Riffle Habitat Surveyed as Cascades:	--	20.4
% Pools with > 35% Embeddedness:	99	--

Large Woody Debris Size	Pieces per km
< 5 m long, 5 cm – 10 cm diameter:	53
< 5 m long, 11-50 cm diameter:	63
< 5 m long, >50 cm diameter:	45
> 5 m long, 5 cm – 10 cm diameter:	26
> 5 m long, 11-50 cm diameter:	28
> 5 m long, >50 cm diameter:	23
Rootwads:	2
Total:	241

Riparian Width	Total Width* (m)	Left & Right Width** (m)
Mean	5	3
Maximum	8	84
75 th Percentile	5	0
25 th Percentile	4	0
Minimum	3	0

*Left riparian, right riparian, and bankfull channel widths were added together for calculations

**Left and right riparian widths were grouped (not added) together for calculations

Other Stream Attributes	
Mean Bankfull Channel Width (m):	4
Mean Channel Gradient (%):	8

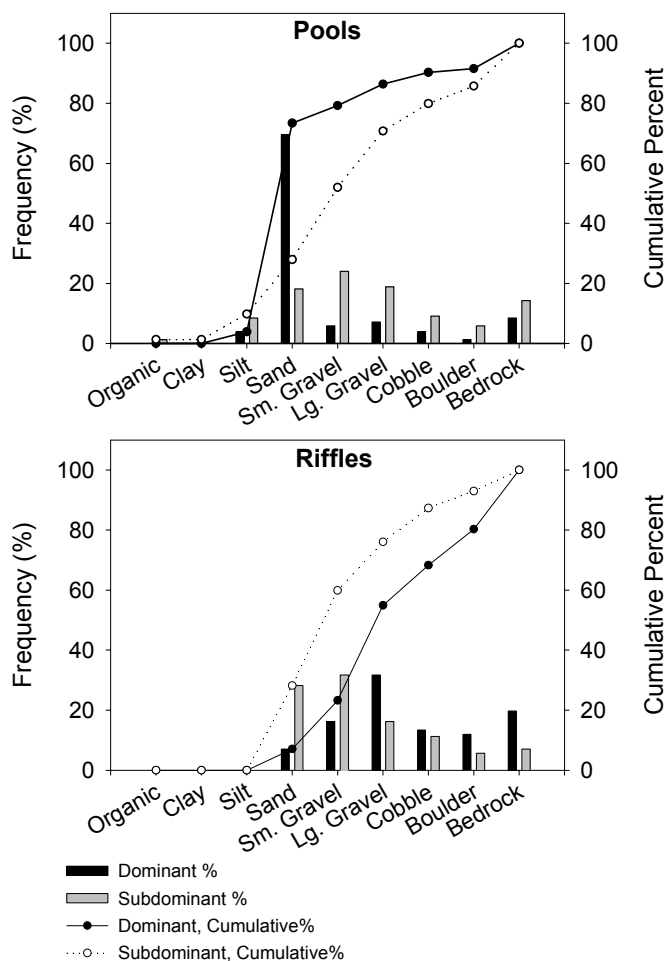


Figure A19. Frequency (percent) and cumulative percent of dominant and subdominant substrate occurrence for pools and riffles in Ammon's Branch, summer 2002.

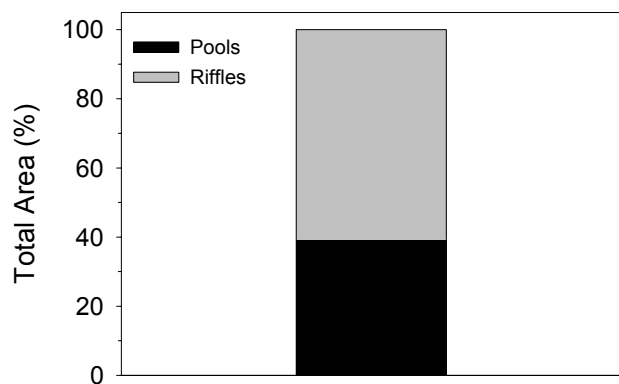


Figure A20. Estimated area of Ammon's Branch in pools and riffles as calculated using BVET techniques, summer 2002.

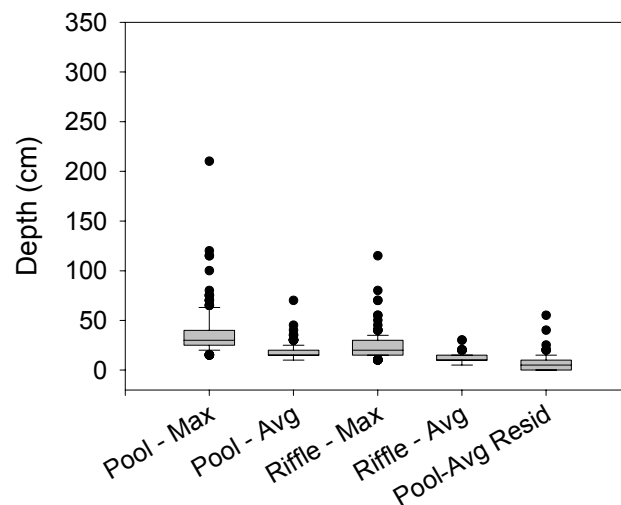


Figure A21. Maximum and average depths and residual pool depths for pools and riffles in Ammon's Branch, summer 2002. The top and bottom of the boxes represent the 25th and 75th percentiles, the bar in the center of the box represents the median, whiskers represent the 10th and 90th percentiles, and closed circles represent the entire range of the data.

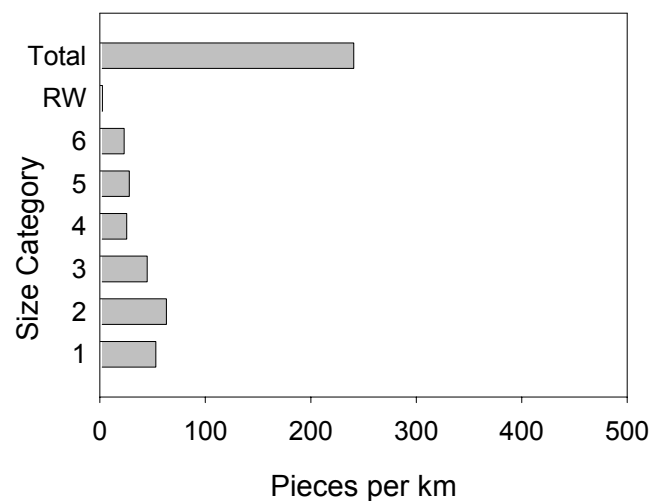


Figure A22. LWD per kilometer in Ammon's Branch, summer 2002.

Table A8. Stream features found on Ammon's Branch during BVET habitat survey, summer 2002.
Distance is meters from start of survey.

Stream Feature	Distance (m)	Width (m)	Comments
Tributary	183.2	0.5	on left
Tributary	197.0		
Tributary	267.6	1.0	on right
Tributary	322.5	1.0	on right
Waterfall	473.2		120 ft tall, inaccessible exited stream on FS trail with overlook deck of falls
Bug sample site 1	510.2		in habitat unit R45
Tributary	564.7	0.5	on left, a trickle
Tributary	802.1	0.5	on left, dry
Seep	866.0		on right
Seep	879.9		on left
Waterfall	925.4		2.5 m tall
Tributary	1031.0	1.5	on left
Seep	1089.2		on left
Seep	1264.6		on right
Culvert	1439.9		road crossing man made dam at end of culvert
Bug sample site 2	1472.0		in habitat unit R93
Seep	1658.2		on right
Tributary	1684.6	2.0	on left
Side Channel Out	1754.7	1.5	on left, possibly a seep
Tributary	1919.2	1.5	on left
Side Channel In	1994.2	1.0	on left
Side Channel Out	2017.2	1.0	on left
Side Channel In	2031.0		on left
Side Channel Out	2046.6		on left
Tributary	2066.9	1.0	on right
Side Channel In	2111.1	1.0	on left
Side Channel Out	2131.2		on left
Tributary	2130.2	1.0	on left joins side channel
Side Channel Out	2143.7	1.0	on left
Underground	2260.2		from 2258.2 m to 2260.2 m
Bug sample site 3	2455.0		in habitat unit R140
Tributary	2593.7	1.0	on left
Other	2651.4		North Carolina state line
Tributary	2653.3	8.0	trickling over bedrock
Tributary	2712.8	0.8	on left
Waterfall	2715.2		3 m tall
Tributary	2774.8	1.0	on left
Tributary	2805.5	1.0	on left
Tributary	2810.4	1.5	on left
Seep	2832.0		on right
Tributary	2868.5	0.5	on right

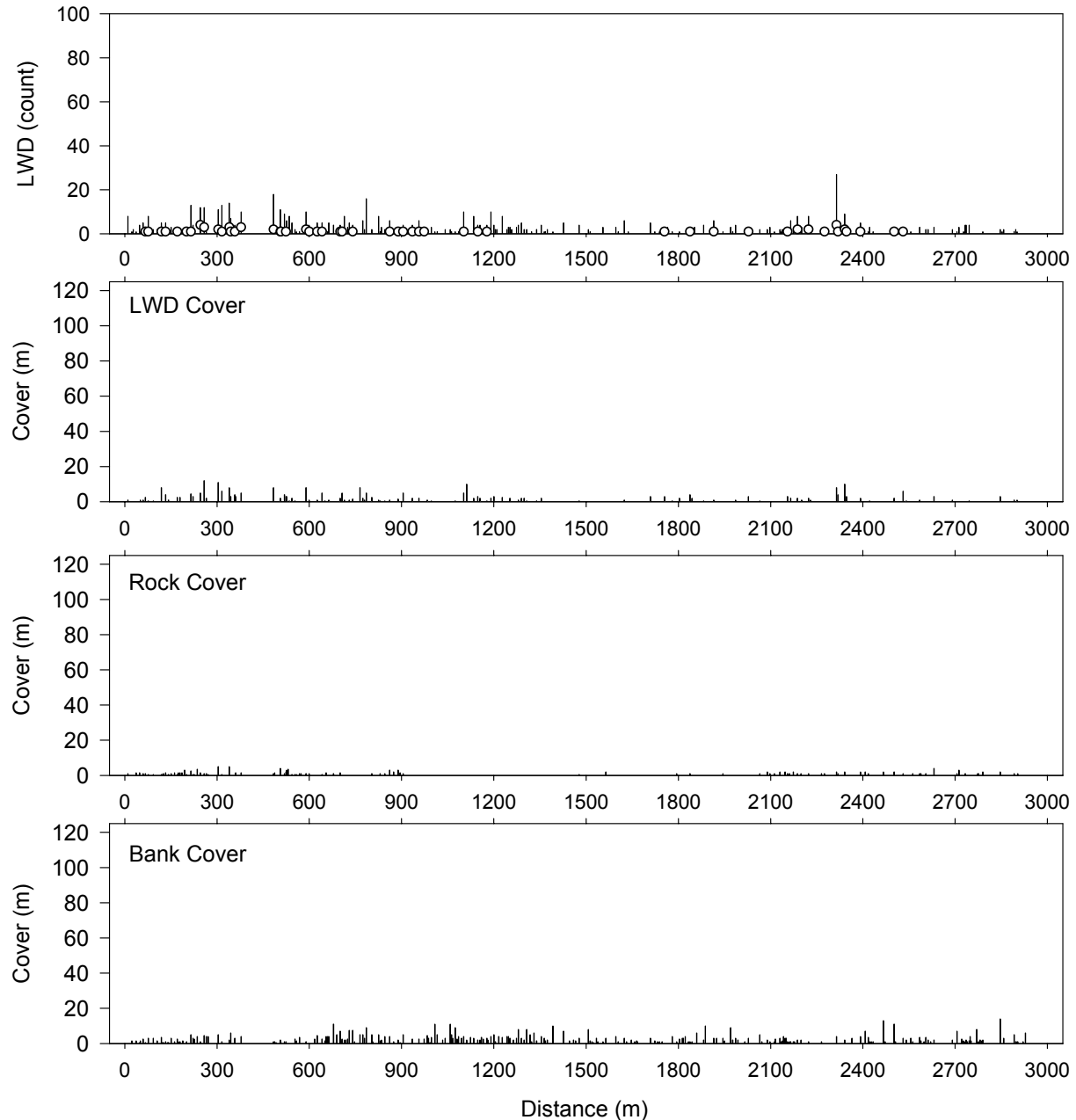


Figure A23. Distribution and abundance of LWD, and distribution of LWD, rock, and bank cover in Ammon's Branch, summer 2002. LWD and cover were recorded for each habitat unit in the stream. Distance is meters upstream of confluence with Holcomb Creek.

LWD distribution and abundance: Vertical bars indicate total count of LWD. Open circles represent the amount of the total LWD that was >5 m in length, >50 cm in diameter (size 6).

LWD, rock, and bank cover: Cover was defined as linear meters of the cover type within the wetted channel under which a 15 cm long object could be hidden from overhead view. Vertical bars indicate amount of cover in linear meters.

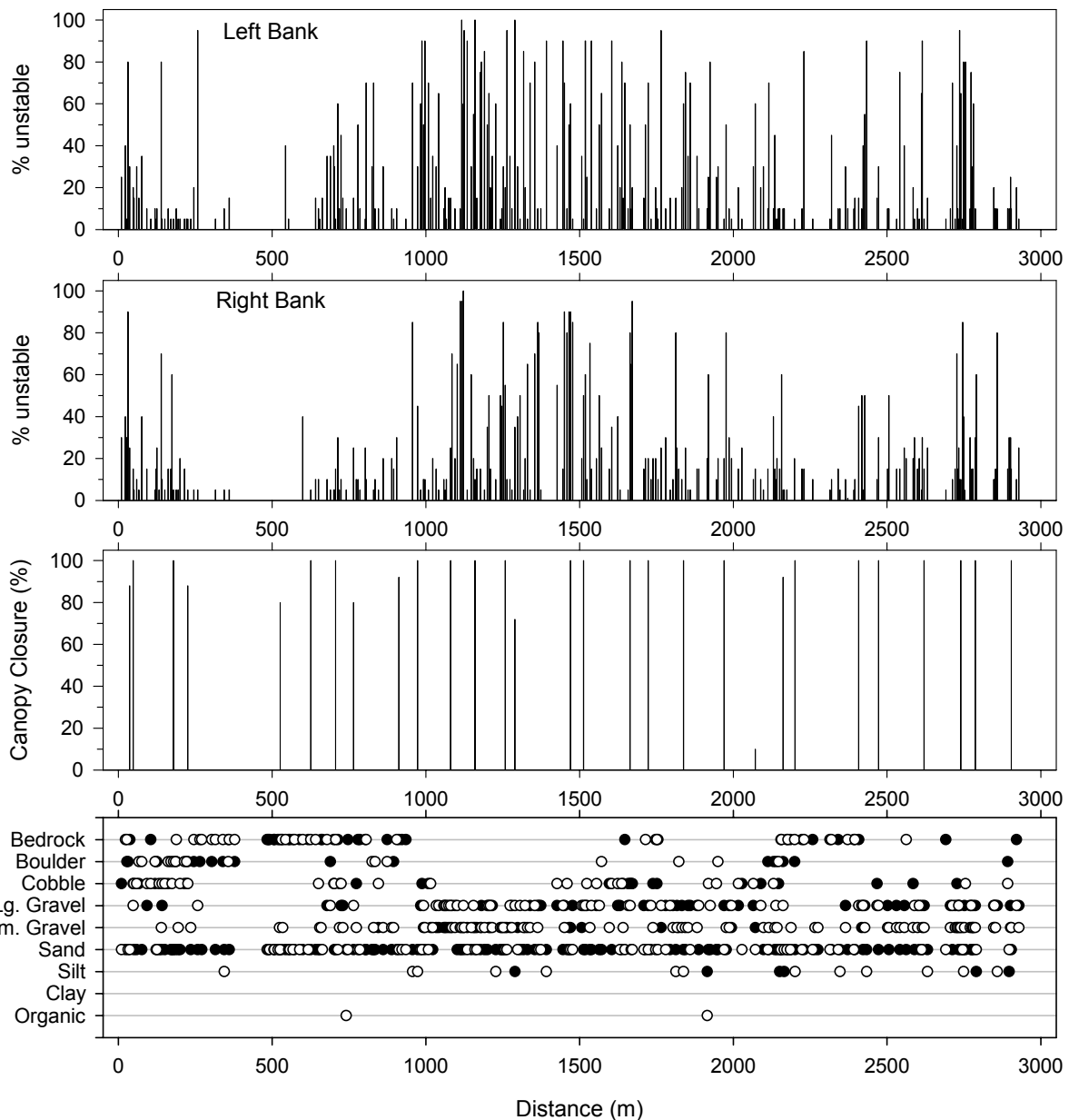


Figure A24. Bank stability, canopy closure and substrate distribution in Ammon's Branch, summer 2002. Bank stability and substrate were recorded for each habitat unit in the stream. Canopy closure was measured where paired samples were recorded. Distance is meters upstream of confluence with Holcomb Creek.

Bank stability: Left and right bank were recorded as looking upstream. Vertical bars indicate percent of bank identified as unstable.

Canopy closure: Vertical bars indicate percent of canopy closure.

Substrate distribution: Closed circles indicate dominant substrate type, open circles indicate subdominant substrate type.

Table A9. Stream habitat survey summary for Bailey Branch, 2002.

Stream:	Bailey Branch
District:	Tallulah
USGS Quadrangle:	Rabun Bald
Survey Date:	05/30/02
Downstream Starting Point:	Confluence with Addie Branch
Total Distance Surveyed (km):	2.4

	Pools	Riffles
Percent of Total Stream Area:	27	73
Number:	123	113
Number per km:	51	47
Total Area (m ²):	2222±330	5956±379
Mean Area (m ²):	18	53
Correction Factor:	1.05	1.11
# of Paired Samples:	12	11
Mean Maximum Depth (cm):	31	21
Mean Average Depth (cm):	17	11
Mean Residual Pool Depth (cm):	7	--
% of Pool Habitat Surveyed as Glides:	2	--
% of Riffle Habitat Surveyed as Runs:	--	4.4
% of Riffle Habitat Surveyed as Cascades:	--	3.5
% Pools with > 35% Embeddedness:	98	--

Large Woody Debris Size	Pieces per km
< 5 m long, 5 cm – 10 cm diameter:	201
< 5 m long, 11-50 cm diameter:	177
< 5 m long, >50 cm diameter:	72
> 5 m long, 5 cm – 10 cm diameter:	93
> 5 m long, 11-50 cm diameter:	104
> 5 m long, >50 cm diameter:	43
Rootwads:	9
Total:	700

Riparian Width	Total Width* (m)	Left & Right Width** (m)
Mean	20	8
Maximum	100	50
75 th Percentile	18	7
25 th Percentile	6	0
Minimum	4	0

*Left riparian, right riparian, and bankfull channel widths were added together for calculations

**Left and right riparian widths were grouped (not added) together for calculations

Other Stream Attributes	
Mean Bankfull Channel Width (m):	4
Mean Channel Gradient (%):	4

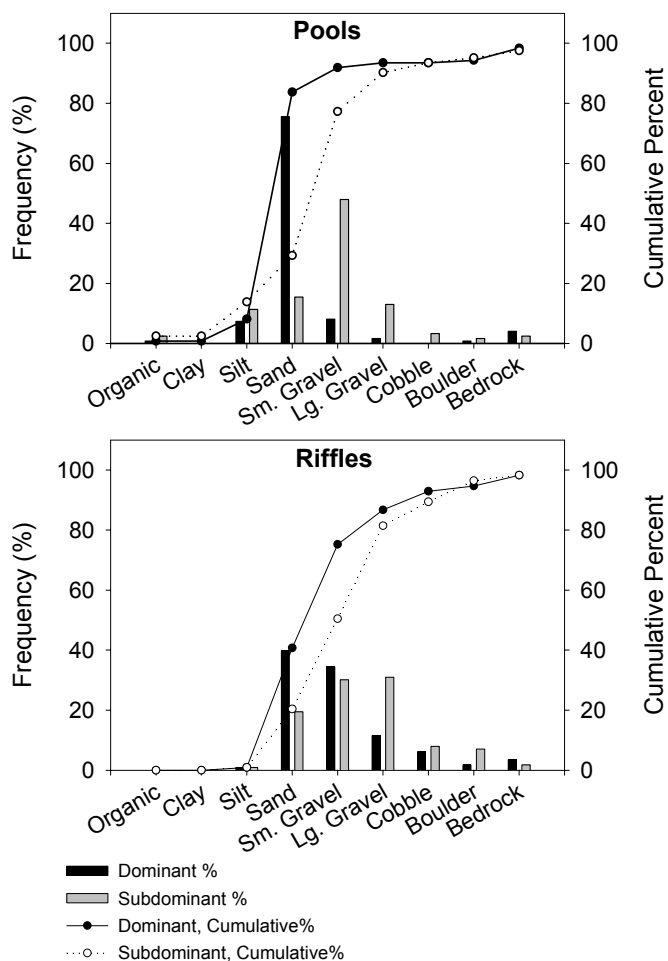


Figure A25. Frequency (percent) and cumulative percent of dominant and subdominant substrate occurrence for pools and riffles in Bailey Branch, summer 2002.

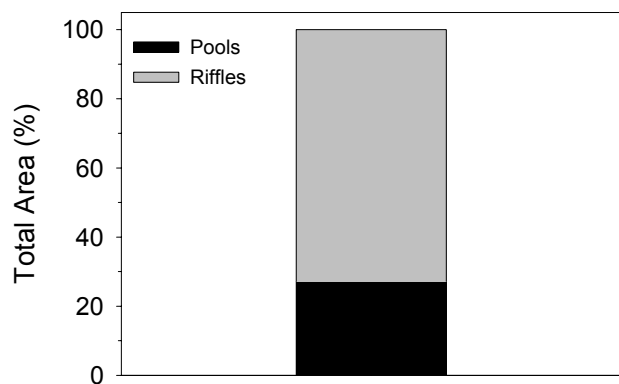


Figure A26. Estimated area of Bailey Branch in pools and riffles as calculated using BVET techniques, summer 2002.

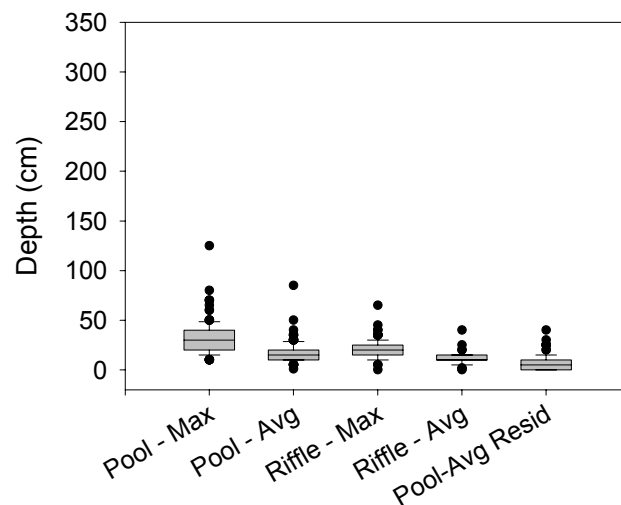


Figure A27. Maximum and average depths and residual pool depths for pools and riffles in Bailey Branch, summer 2002. The top and bottom of the boxes represent the 25th and 75th percentiles, the bar in the center of the box represents the median, whiskers represent the 10th and 90th percentiles, and closed circles represent the entire range of the data.

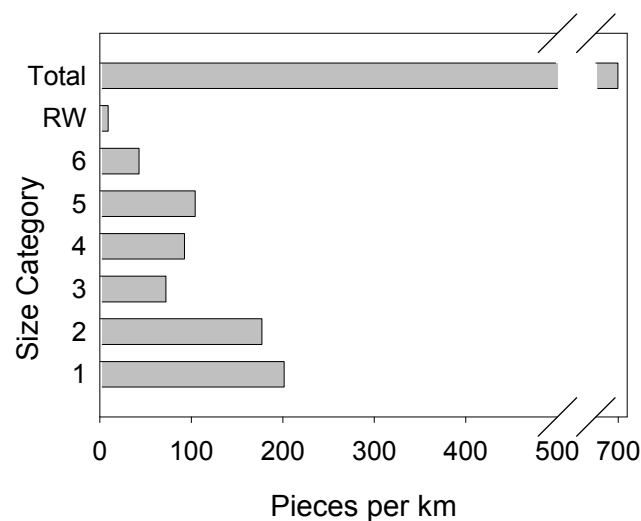


Figure A28. LWD per kilometer in Bailey Branch, summer 2002.

Table A10. Stream features found on Bailey Branch during BVET habitat survey, summer 2002. Distance is meters from start of survey.

Stream Feature	Distance (m)	Width (m)	Comments
Seep	251.1		on left
Bug sample site 1	510.9		in habitat unit R27
Tributary	545.4	1.0	on right
Tributary	590.4	0.5	on left
Culvert	623.5		1.1 m diameter Hale Ridge Road
Tributary	729.5	1.5	on left
Tributary	783.1	0.5	on left
Tributary	875.1	1.0	
Side Channel In	917.9	2.0	on right
Side Channel Out	939.1	2.0	on right
Tributary	986.5	1.0	on left
Tributary	1067.8	1.0	on right
Tributary	1157.5	0.5	on right
Side Channel Out	1206.7	0.5	on right
Side Channel Out	1228.0	1.0	on right
Tributary	1363.3	0.5	on right
Tributary	1481.0	1.0	
Bug sample site 2	1526.0		in habitat unit R81
Tributary	1644.2	0.8	on right
Tributary	1673.9	1.5	on right
Tributary	1697.9	0.5	on right
Tributary	1703.0	0.5	on right
Tributary	1734.3	2.0	on left
Tributary	1746.9	1.5	on right
Tributary	1770.7	0.5	on left
Tributary	1791.0	1.0	on right
Tributary	1827.7	1.5	on right
Underground	1847.0		from 1840.8 m to 1847.0 m
Tributary	1864.4	1.0	on right
Seep	1888.1		
Seep	1940.0		on left
Seep	1994.1	1.5	on left
Underground	2004.2		from 2000.8 m to 2004.2 m
Tributary	2013.3	2.0	on left
Seep	2111.5		on left bank
Seep	2276.3		on right bank
Seep	2294.6		on right bank
Seep	2301.9		on left bank
Tributary	2309.0	1.0	on left
Seep	2321.7		on right
Underground	2327.5		from 2323.9 m to 2327.5 m
Underground	2398.2		from 2378.0 m to 2398.2 m turns into dry creekbed

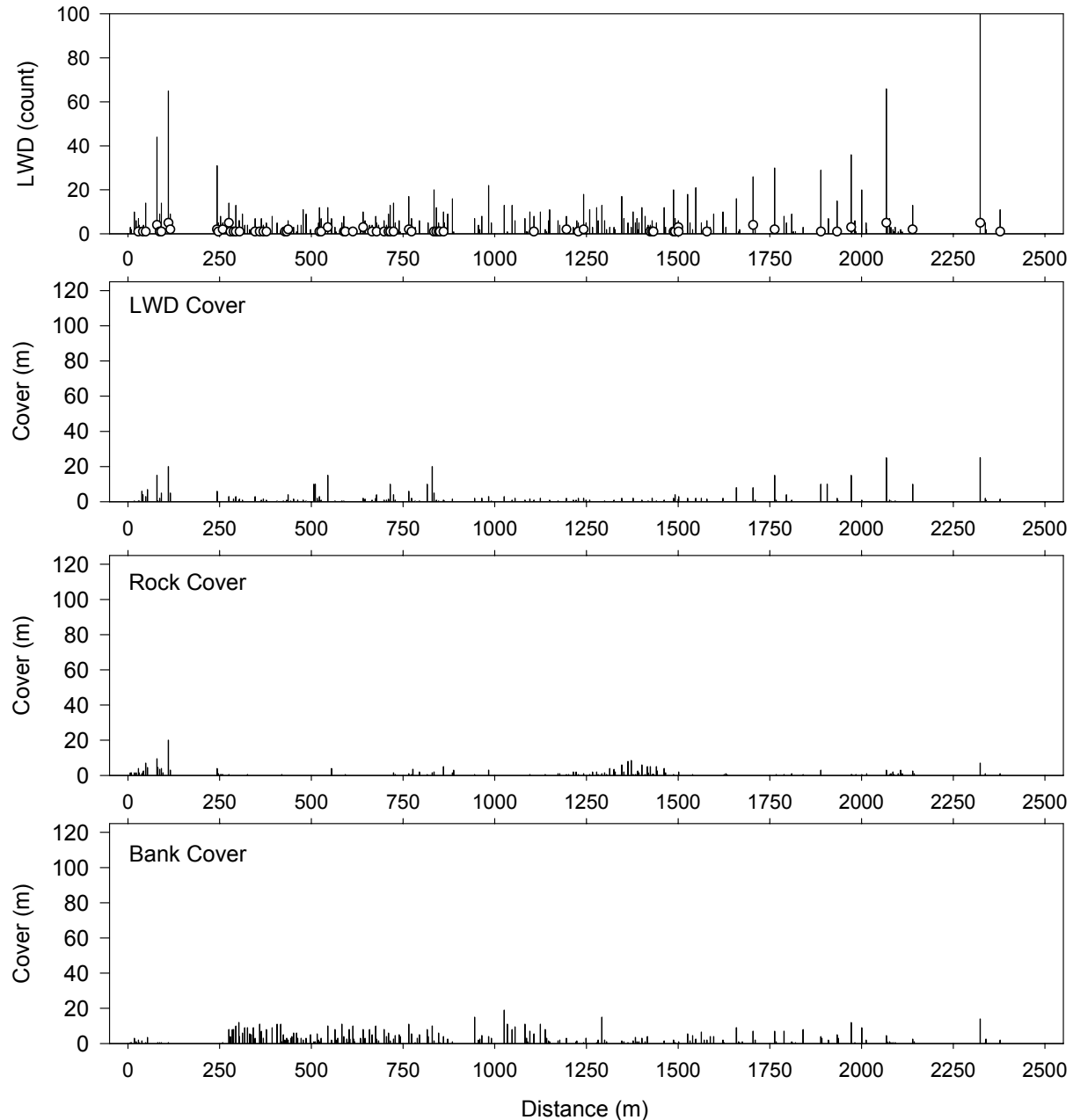


Figure A29. Distribution and abundance of LWD, and distribution of LWD, rock, and bank cover in Bailey Branch, summer 2002. LWD and cover were recorded for each habitat unit in the stream. Distance is meters upstream of confluence with Addie Branch.

LWD distribution and abundance: Vertical bars indicate total count of LWD. Open circles represent the amount of the total LWD that was >5 m in length, >50 cm in diameter (size 6).

LWD, rock, and bank cover: Cover was defined as linear meters of the cover type within the wetted channel under which a 15 cm long object could be hidden from overhead view. Vertical bars indicate amount of cover in linear meters.

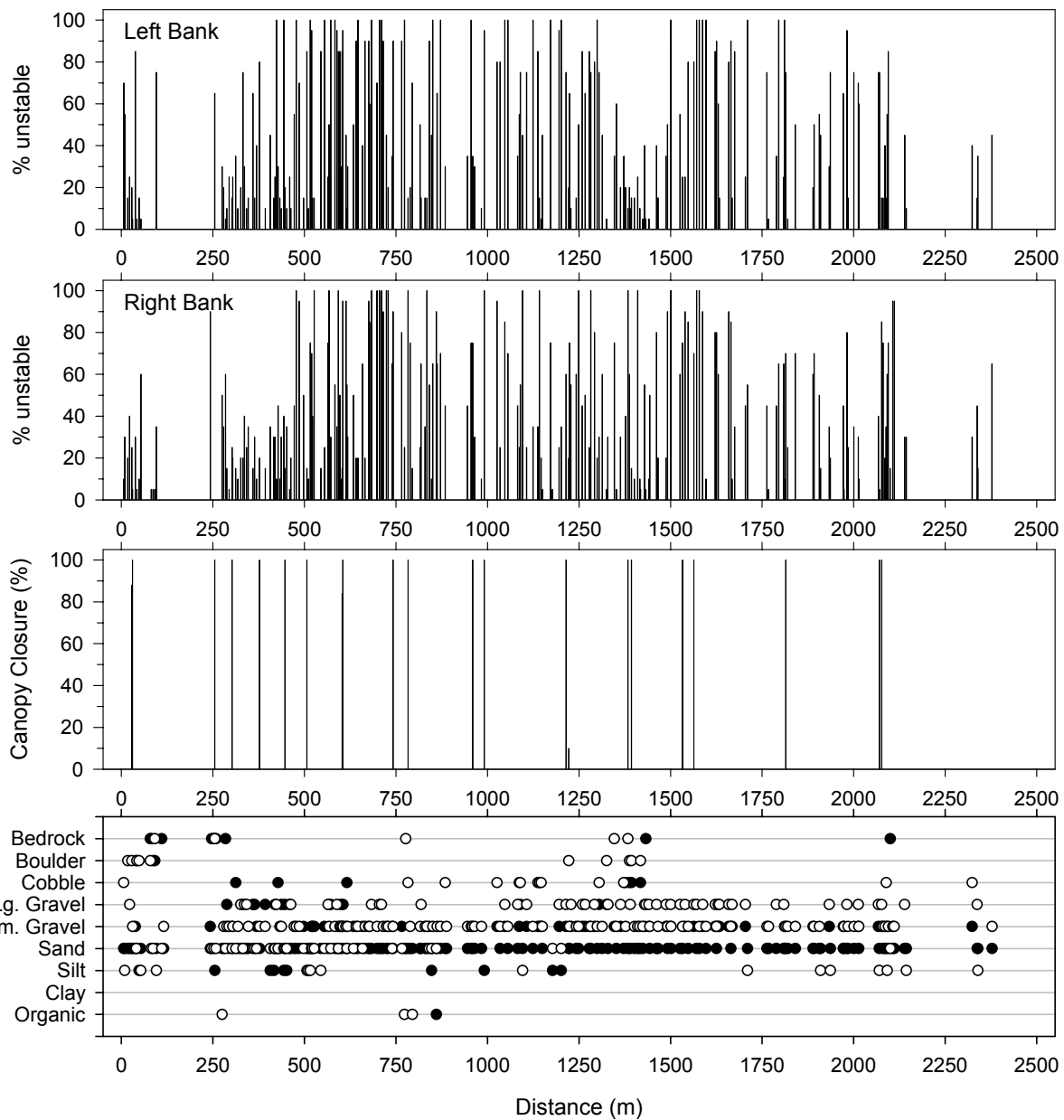


Figure A30. Bank stability, canopy closure and substrate distribution in Bailey Branch, summer 2002. Bank stability and substrate were recorded for each habitat unit in the stream. Canopy closure was measured where paired samples were recorded. Distance is meters upstream of confluence with Addie Branch.

Bank stability: Left and right bank were recorded as looking upstream. Vertical bars indicate percent of bank identified as unstable.

Canopy closure: Vertical bars indicate percent of canopy closure.

Substrate distribution: Closed circles indicate dominant substrate type, open circles indicate subdominant substrate type.

Table A11. Stream habitat survey summary for Billingsley Creek, 2002.

Stream:	Billingsley Creek
District:	Tallulah
USGS Quadrangle:	Satolah
Survey Date:	05/31/02
Downstream Starting Point:	Confluence with Holcomb Creek
Total Distance Surveyed (km):	2.2

	Pools	Riffles
Percent of Total Stream Area:	12	88
Number:	41	67
Number per km:	19	31
Total Area (m ²):	729±87	5144±375
Mean Area (m ²):	18	77
Correction Factor:	1.19	1.27
# of Paired Samples:	4	7
Mean Maximum Depth (cm):	32	25
Mean Average Depth (cm):	20	13
Mean Residual Pool Depth (cm):	8	--
% of Pool Habitat Surveyed as Glides:	27	--
% of Riffle Habitat Surveyed as Runs:	--	0
% of Riffle Habitat Surveyed as Cascades:	--	10.4
% Pools with > 35% Embeddedness:	100	--

Large Woody Debris Size	Pieces per km
< 5 m long, 5 cm – 10 cm diameter:	145
< 5 m long, 11-50 cm diameter:	173
< 5 m long, >50 cm diameter:	9
> 5 m long, 5 cm – 10 cm diameter:	37
> 5 m long, 11-50 cm diameter:	39
> 5 m long, >50 cm diameter:	3
Rootwads:	3
Total:	409

Riparian Width	Total Width* (m)	Left & Right Width** (m)
Mean	30	13
Maximum	164	100
75 th Percentile	12	3
25 th Percentile	6	1
Minimum	4	0

*Left riparian, right riparian, and bankfull channel widths were added together for calculations

**Left and right riparian widths were grouped (not added) together for calculations

Other Stream Attributes	
Mean Bankfull Channel Width (m):	4
Mean Channel Gradient (%):	4

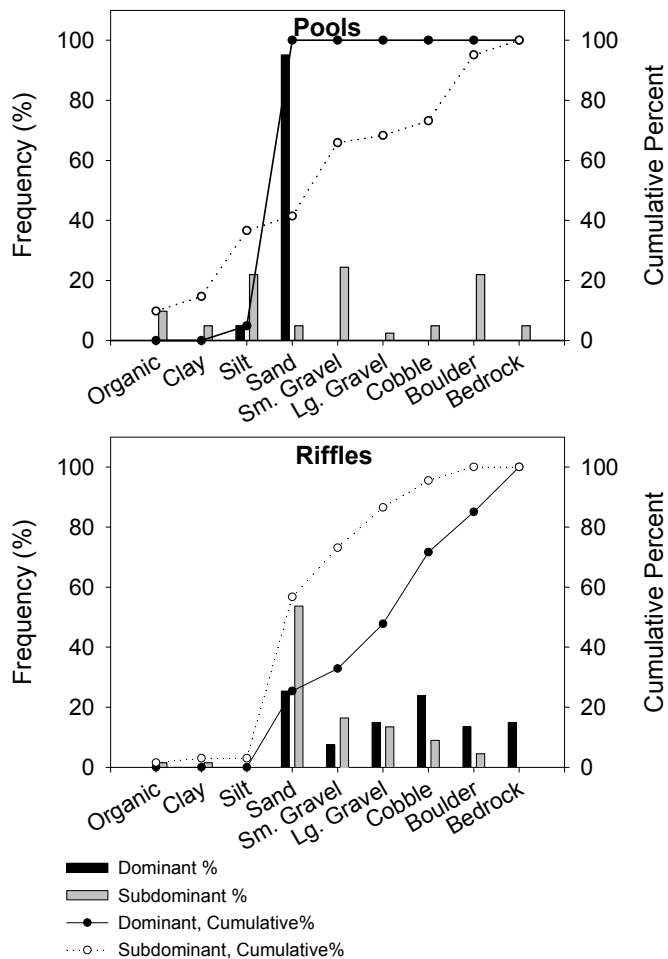


Figure A31. Frequency (percent) and cumulative percent of dominant and subdominant substrate occurrence for pools and riffles in Billingsley Creek, summer 2002.

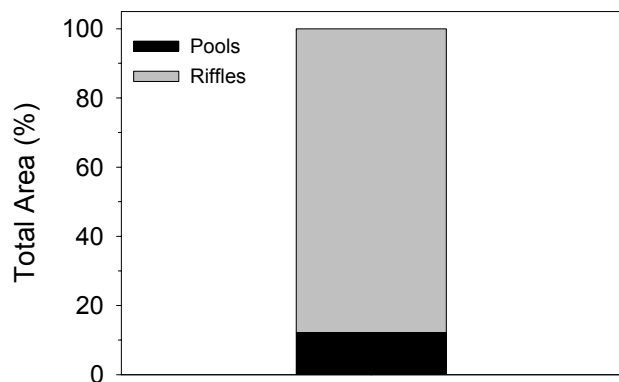


Figure A32. Estimated area of Billingsley Creek in pools and riffles as calculated using BVET techniques, summer 2002.

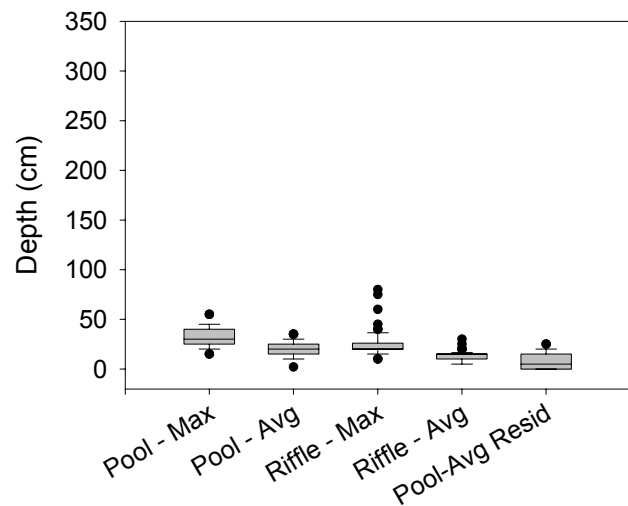


Figure A33. Maximum and average depths and residual pool depths for pools and riffles in Billingsley Creek, summer 2002. The top and bottom of the boxes represent the 25th and 75th percentiles, the bar in the center of the box represents the median, whiskers represent the 10th and 90th percentiles, and closed circles represent the entire range of the data.

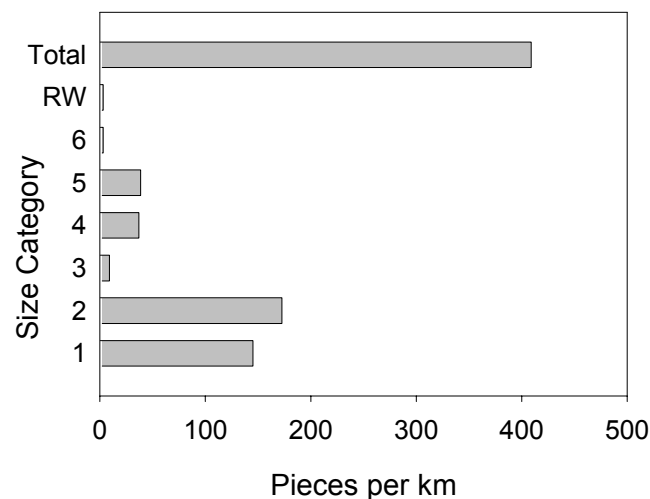


Figure A34. LWD per kilometer in Billingsley Creek, summer 2002.

Table A12. Stream features found on Billingsley Creek during BVET habitat survey, summer 2002.
Distance is meters from start of survey.

Stream Feature	Distance (m)	Width (m)	Comments
Culvert	184.5	1.2	12.9 m, circular metal culvert on FS gravel road 86B
Bug sample site 1	368.0		
Tributary	403.6	0.5	on right
Tributary	593.7	0.8	on left
Tributary	674.7	1.0	on right
Side Channel In	850.3	1.0	on left
Side Channel Out	855.3	1.5	on right
Tributary	881.3	1.0	on left
Tributary	904.5	0.5	on right
Tributary	998.8	1.0	on right
Tributary	1032.9	0.3	on left
Tributary	1061.6	0.3	on left
Tributary	1225.8	0.5	on right
Bug sample site 2	1368.0		
Tributary	1373.7	0.5	on left
Tributary	1593.0	1.0	on left
Tributary	1635.2	0.5	on left
Tributary	1738.8	1.0	on left
Side Channel In	1794.9	1.5	on right
Side Channel Out	1802.1		on right
Tributary	1799.9	0.3	on left
Side Channel In	1954.6	0.5	on left
Side Channel Out	1968.5	0.3	on left
Tributary	2016.1	0.5	on right
Tributary	2042.0		on left, distance estimated
Tributary	2087.9	0.3	on left

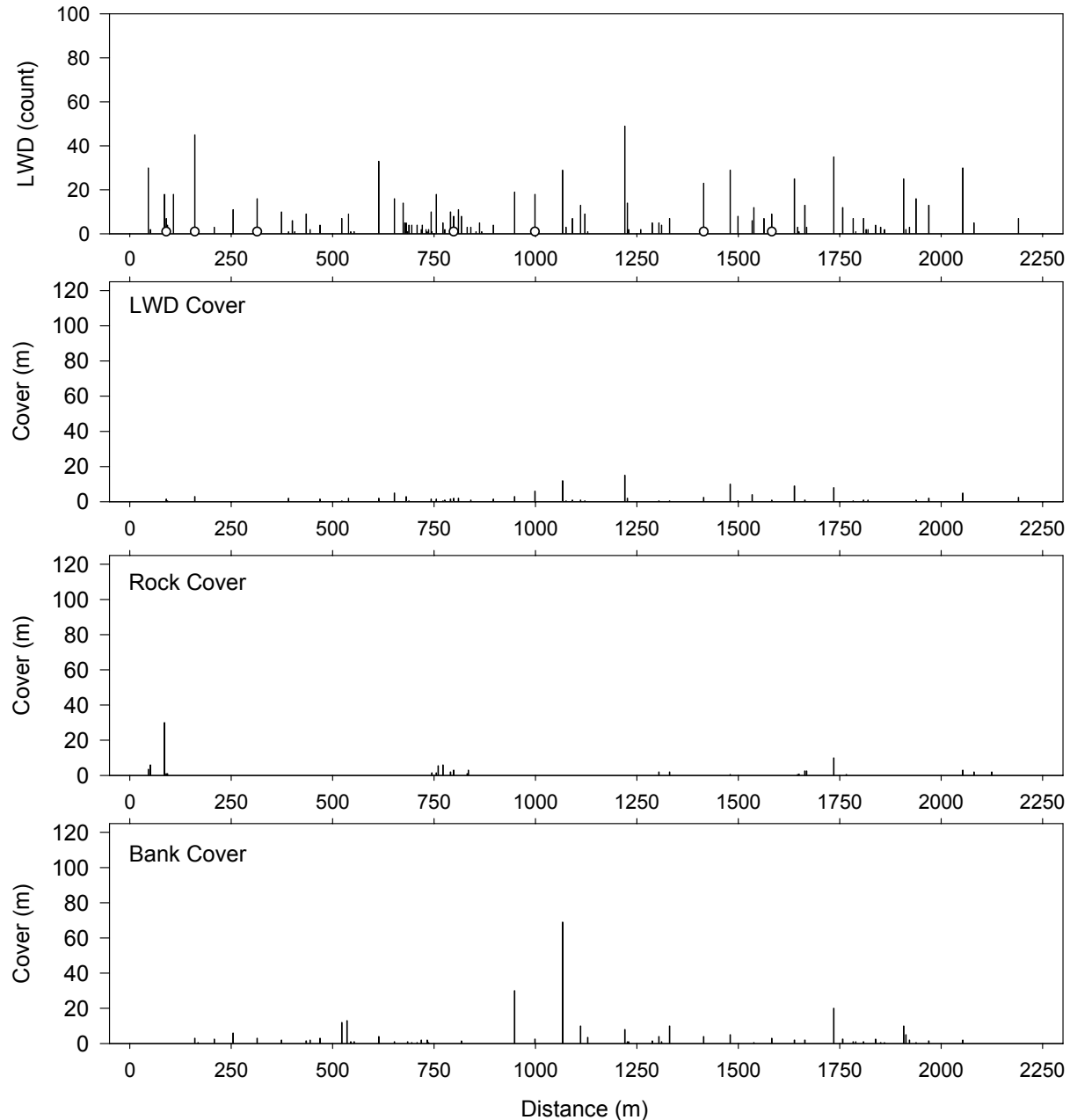


Figure A35. Distribution and abundance of LWD, and distribution of LWD, rock, and bank cover in Billingsley Creek, summer 2002. LWD and cover were recorded for each habitat unit in the stream. Distance is meters upstream of confluence with Holcomb Creek.

LWD distribution and abundance: Vertical bars indicate total count of LWD. Open circles represent the amount of the total LWD that was >5 m in length, >50 cm in diameter (size 6).

LWD, rock, and bank cover: Cover was defined as linear meters of the cover type within the wetted channel under which a 15 cm long object could be hidden from overhead view. Vertical bars indicate amount of cover in linear meters.

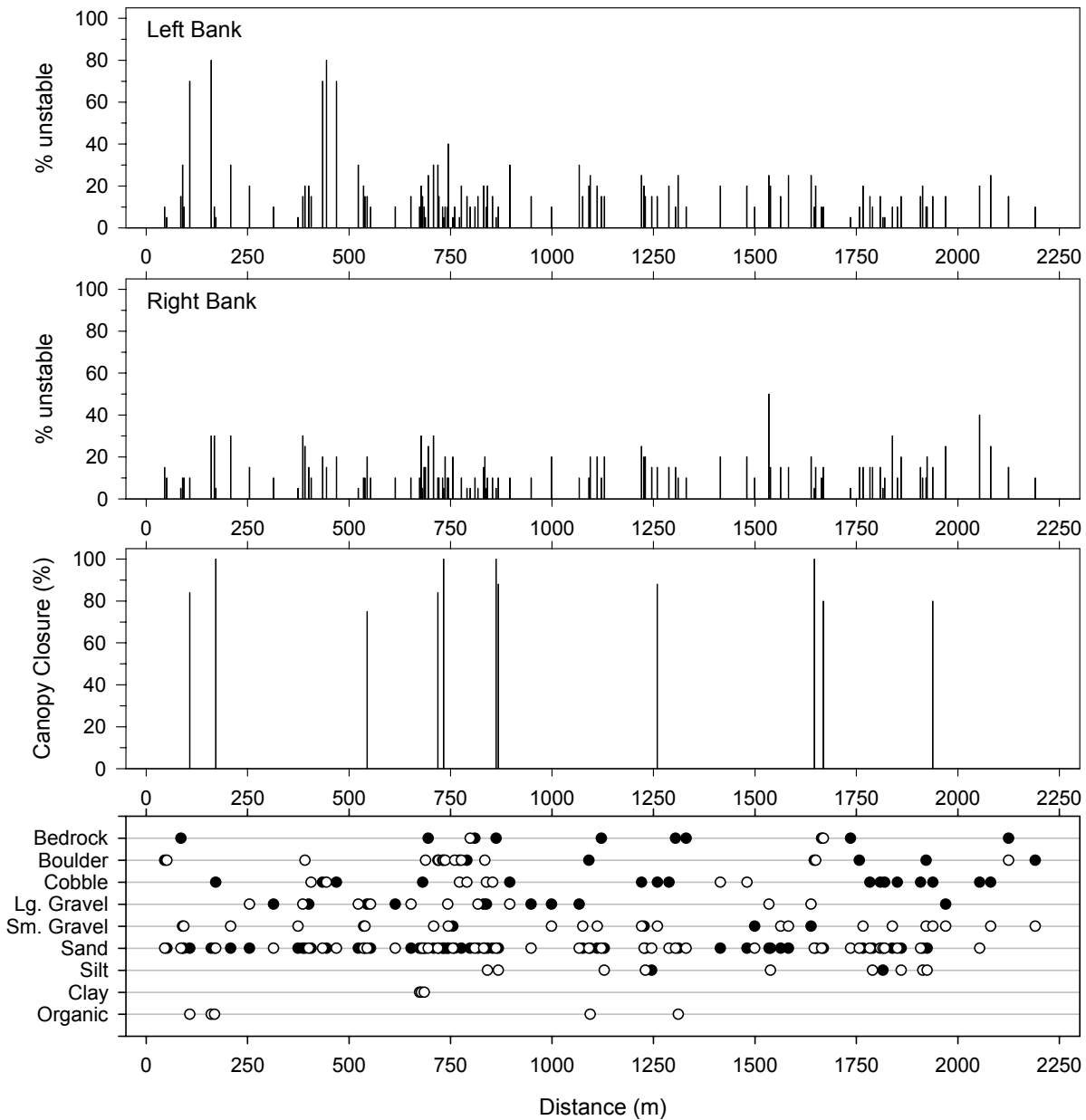


Figure A36. Bank stability, canopy closure and substrate distribution in Billingsley Creek, summer 2002. Bank stability and substrate were recorded for each habitat unit in the stream. Canopy closure was measured where paired samples were recorded. Distance is meters upstream of confluence with Holcomb Creek.

Bank stability: Left and right bank were recorded as looking upstream. Vertical bars indicate percent of bank identified as unstable.

Canopy closure: Vertical bars indicate percent of canopy closure.

Substrate distribution: Closed circles indicate dominant substrate type, open circles indicate subdominant substrate type.

Table A13. Stream habitat survey summary for Emory Branch, 2002.

Stream:	Emory Branch
District:	Tallulah
USGS Quadrangle:	Rabun Bald
Survey Date:	06/02/02
Downstream Starting Point:	Confluence with Holcomb Creek
Total Distance Surveyed (km):	0.9

	Pools	Riffles
Percent of Total Stream Area:	35	65
Number:	50	53
Number per km:	55	58
Total Area (m ²):	1036±235	1882±469
Mean Area (m ²):	21	36
Correction Factor:	1.06	1.01
# of Paired Samples:	5	5
Mean Maximum Depth (cm):	32	25
Mean Average Depth (cm):	18	14
Mean Residual Pool Depth (cm):	5	--
% of Pool Habitat Surveyed as Glides:	0	--
% of Riffle Habitat Surveyed as Runs:	--	11.3
% of Riffle Habitat Surveyed as Cascades:	--	9.4
% Pools with > 35% Embeddedness:	100	--

Large Woody Debris Size	Pieces per km
< 5 m long, 5 cm – 10 cm diameter:	58
< 5 m long, 11-50 cm diameter:	98
< 5 m long, >50 cm diameter:	72
> 5 m long, 5 cm – 10 cm diameter:	21
> 5 m long, 11-50 cm diameter:	83
> 5 m long, >50 cm diameter:	87
Rootwads:	4
Total:	423

Riparian Width	Total Width* (m)	Left & Right Width** (m)
Mean	9	2
Maximum	10	5
75 th Percentile	9	2
25 th Percentile	8	1
Minimum	8	1

*Left riparian, right riparian, and bankfull channel widths were added together for calculations

**Left and right riparian widths were grouped (not added) together for calculations

Other Stream Attributes	
Mean Bankfull Channel Width (m):	4
Mean Channel Gradient (%):	5

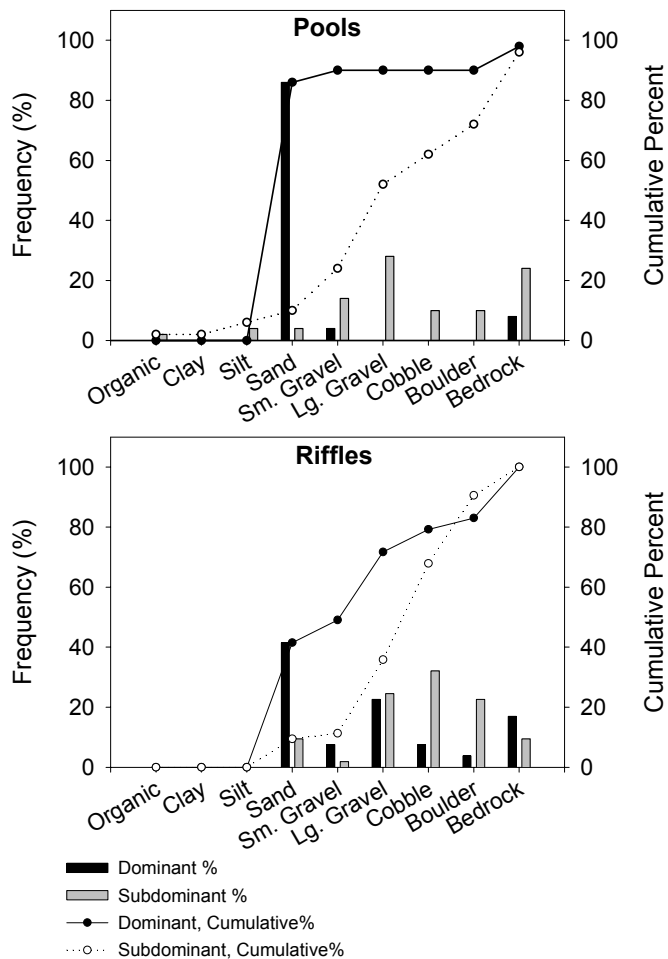


Figure A37. Frequency (percent) and cumulative percent of dominant and subdominant substrate occurrence for pools and riffles in Emory Branch, summer 2002.

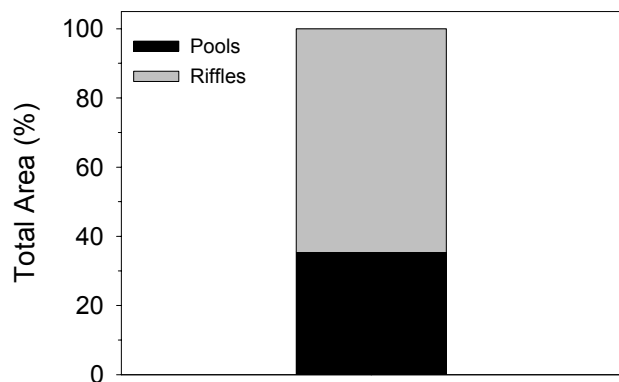


Figure A38. Estimated area of Emory Branch in pools and riffles as calculated using BVET techniques, summer 2002.

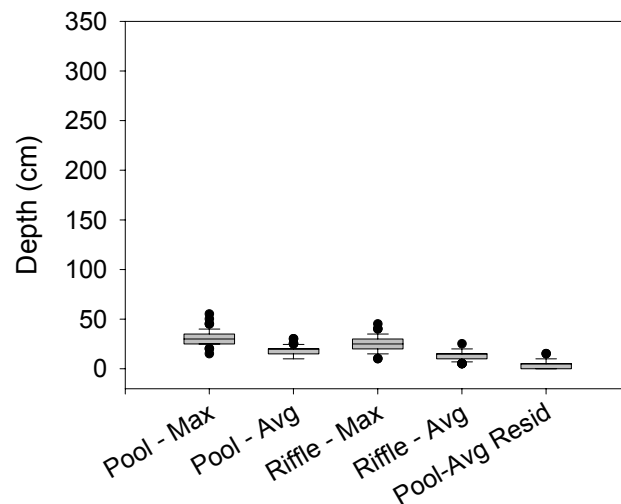


Figure A39. Maximum and average depths and residual pool depths for pools and riffles in Emory Branch, summer 2002. The top and bottom of the boxes represent the 25th and 75th percentiles, the bar in the center of the box represents the median, whiskers represent the 10th and 90th percentiles, and closed circles represent the entire range of the data.

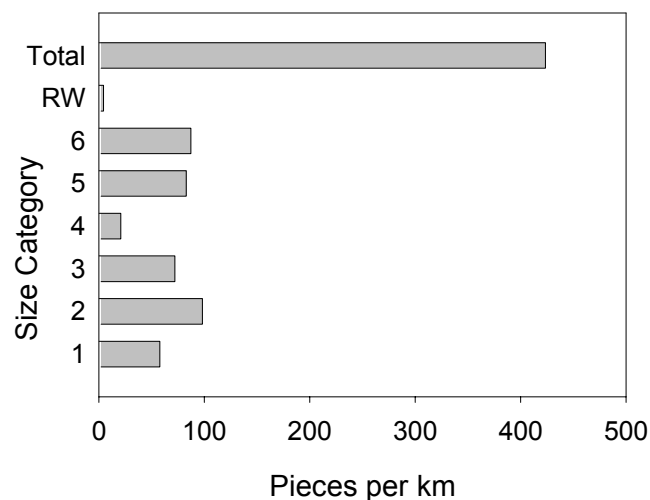


Figure A40. LWD per kilometer in Emory Branch, summer 2002.

Table A14. Stream features found on Emory Branch during BVET habitat survey, summer 2002. Distance is meters from start of survey.

Stream Feature	Distance (m)	Width (m)	Comments
Tributary	96.0	1.5	on right
Seep	100.3		on right
Tributary	128.2	2.0	on right, may just be diverted flow from debris jam
Seep	176.3		on left
Seep	208.7		on left, high velocity underground
Tributary	350.2	0.5	on right trickle over bedrock
Tributary	481.6	0.5	on right
Tributary	488.9	1.0	on left
Seep	541.2		on left
Seep	875.9		on right

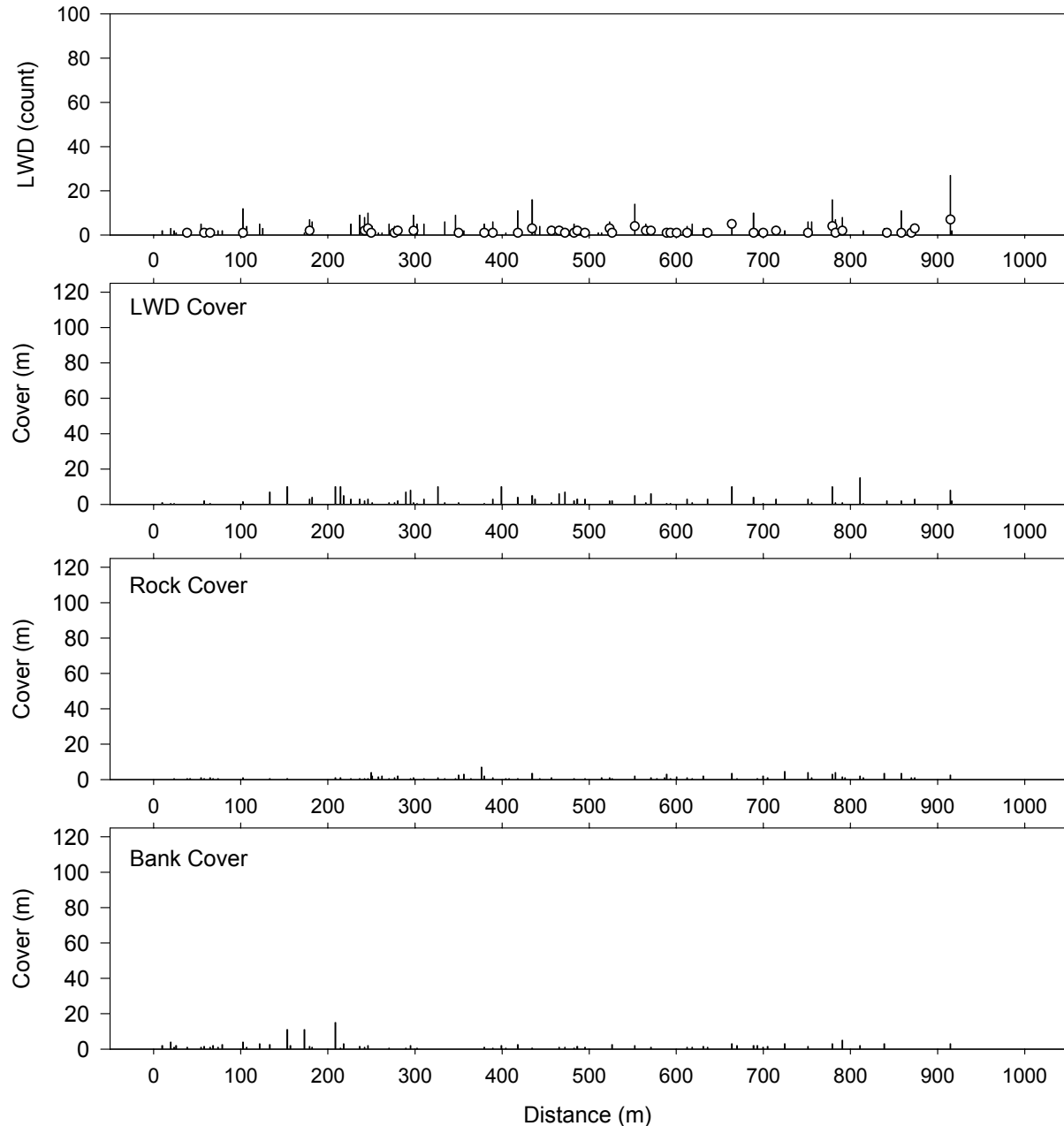


Figure A41. Distribution and abundance of LWD, and distribution of LWD, rock, and bank cover in Emory Branch, summer 2002. LWD and cover were recorded for each habitat unit in the stream. Distance is meters upstream of confluence with Holcomb Creek.

LWD distribution and abundance: Vertical bars indicate total count of LWD. Open circles represent the amount of the total LWD that was >5 m in length, >50 cm in diameter (size 6).

LWD, rock, and bank cover: Cover was defined as linear meters of the cover type within the wetted channel under which a 15 cm long object could be hidden from overhead view. Vertical bars indicate amount of cover in linear meters.

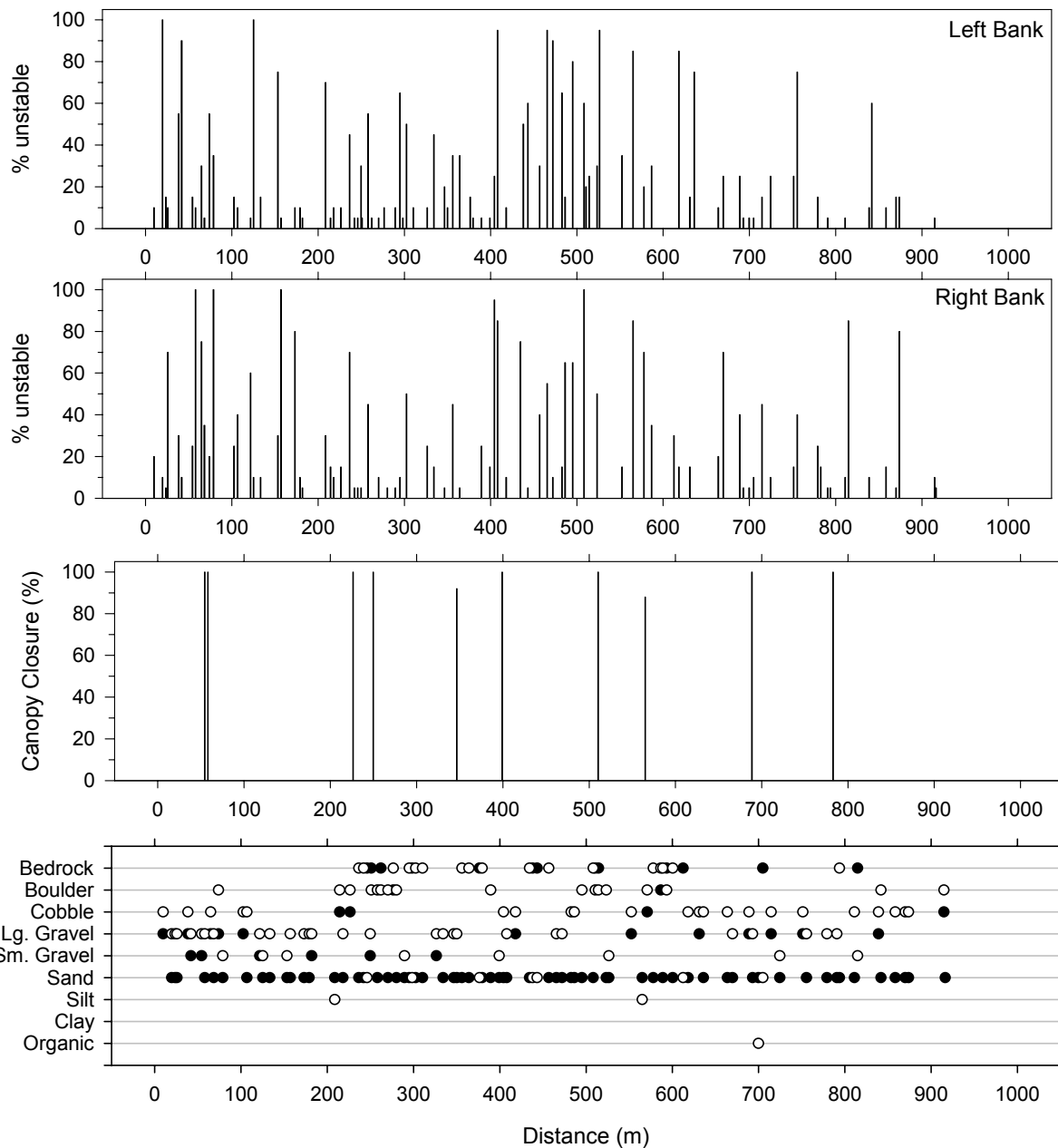


Figure A42. Bank stability, canopy closure and substrate distribution in Emory Branch, summer 2002. Bank stability and substrate were recorded for each habitat unit in the stream. Canopy closure was measured where paired samples were recorded. Distance is meters upstream of confluence with Holcomb Creek.

Bank stability: Left and right bank were recorded as looking upstream. Vertical bars indicate percent of bank identified as unstable.

Canopy closure: Vertical bars indicate percent of canopy closure.

Substrate distribution: Closed circles indicate dominant substrate type, open circles indicate subdominant substrate type.

Table A15. Stream habitat survey summary for Gold Mine Branch, 2002.

Stream:	Gold Mine Branch
District:	Tallulah
USGS Quadrangle:	Satolah
Survey Date:	06/03/02
Downstream Starting Point:	Confluence with Warwoman Creek
Total Distance Surveyed (km):	3.4

	Pools	Riffles
Percent of Total Stream Area:	47	53
Number:	98	70
Number per km:	29	21
Total Area (m ²):	3681±542	4193±130
Mean Area (m ²):	38	60
Correction Factor:	0.96	1.07
# of Paired Samples:	10	7
Mean Maximum Depth (cm):	33	23
Mean Average Depth (cm):	21	12
Mean Residual Pool Depth (cm):	9	--
% of Pool Habitat Surveyed as Glides:	27	--
% of Riffle Habitat Surveyed as Runs:	--	0
% of Riffle Habitat Surveyed as Cascades:	--	1.4
% Pools with > 35% Embeddedness:	100	--

Large Woody Debris Size	Pieces per km
< 5 m long, 5 cm – 10 cm diameter:	61
< 5 m long, 11-50 cm diameter:	117
< 5 m long, >50 cm diameter:	4
> 5 m long, 5 cm – 10 cm diameter:	15
> 5 m long, 11-50 cm diameter:	41
> 5 m long, >50 cm diameter:	1
Rootwads:	5
Total:	245

Riparian Width	Total Width* (m)	Left & Right Width** (m)
Mean	7	2
Maximum	10	6
75 th Percentile	9	3
25 th Percentile	5	1
Minimum	4	0

*Left riparian, right riparian, and bankfull channel widths were added together for calculations

**Left and right riparian widths were grouped (not added) together for calculations

Other Stream Attributes	
Mean Bankfull Channel Width (m):	4
Mean Channel Gradient (%):	2

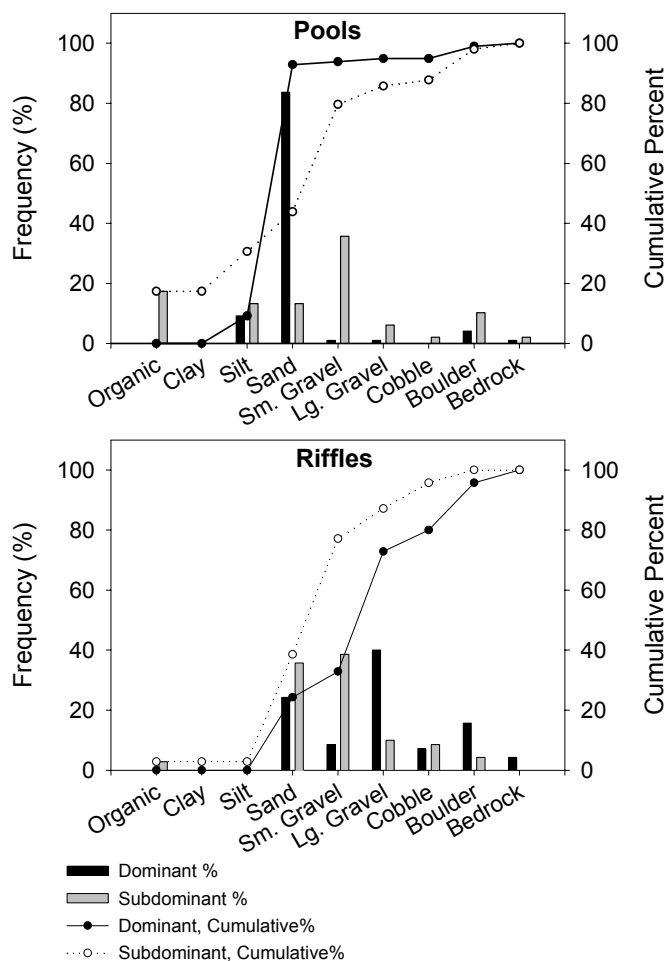


Figure A43. Frequency (percent) and cumulative percent of dominant and subdominant substrate occurrence for pools and riffles in Gold Mine Branch, summer 2002.

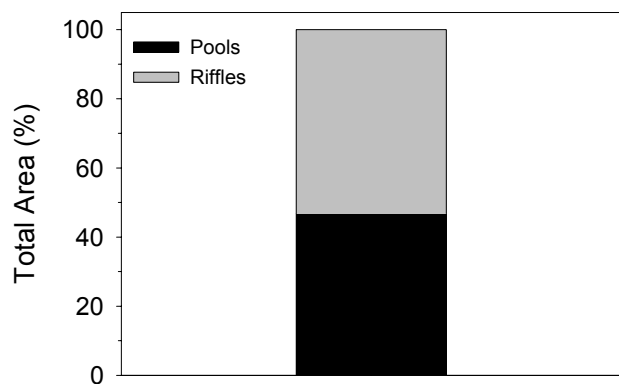


Figure A44. Estimated area of Gold Mine Branch in pools and riffles as calculated using BVET techniques, summer 2002.

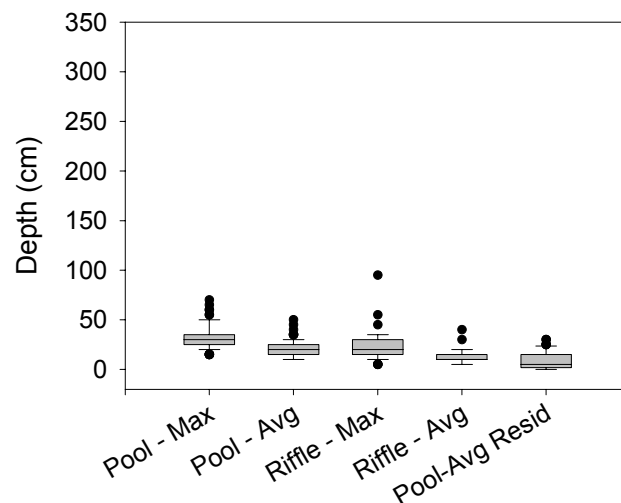


Figure A45. Maximum and average depths and residual pool depths for pools and riffles in Gold Mine Branch, summer 2002. The top and bottom of the boxes represent the 25th and 75th percentiles, the bar in the center of the box represents the median, whiskers represent the 10th and 90th percentiles, and closed circles represent the entire range of the data.

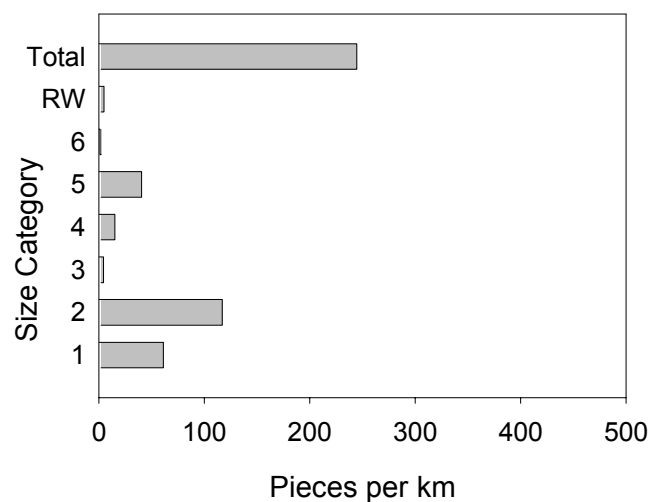


Figure A46. LWD per kilometer in Gold Mine Branch, summer 2002.

Table A16. Stream features found on Gold Mine Branch during BVET habitat survey, summer 2002.
Distance is meters from start of survey.

Stream Feature	Distance (m)	Width (m)	Comments
Tributary	170.3	0.5	on right
Side Channel In	259.4	2.0	on right
Side Channel Out	280.0	1.5	on right
Tributary	328.8	0.3	on right
Other	332.8		large log jam
Trail Crossing	368.5	3.0	FS trail
Other	533.1		log jam
Bug sample site 1	809.0		
Tributary	1057.0	0.5	on left, enters side channel below waterfall
Waterfall	1088.0		set of waterfalls approximately 70-80 meters
Tributary	1144.4	0.2	on right
Tributary	1179.4	0.2	on left
Dam	1208.0	4.0	beaver dam
Dam	1263.4	6.0	beaver dam
Dam	1318.2	12.0	beaver dam
Tributary	1370.8	0.3	on left
Dam	1386.4	10.0	beaver dam
Dam	1453.5	15.0	beaver dam
Tributary	1463.4	0.5	on left
Dam	1488.4	6.0	beaver dam
Dam	1546.8	5.0	beaver dam
Dam	1610.4	4.5	beaver dam
Dam	1694.1	7.0	beaver dam
Bug sample site 2	1809.0		
Other	1894.1		log jam
			beaver ponds, marsh-like w/ bulrush, too muddy
Dam	2145.2		to walk through, distance is an estimation distance
			from log jam to road crossing
Tributary	2172.1	0.5	on left
Tributary	2363.0	0.3	on left
Tributary	2376.9	0.3	on left
Tributary	2387.8	0.3	on left probably branch of previous trib
Underground	2427.2		from 2421.4 m to 2427.2 m, lots of sediment
Tributary	2465.6	0.5	on left
Tributary	2486.2	0.3	on left
Other	2593.8		log jam
Underground	2641.0		from 2638.0 m to 2641.0 m, goes out on R
Underground	2815.2		from 2809.4 m to 2815.2 m, lots of sediment
Tributary	2935.2	0.3	on right
Tributary	3009.1	1.5	on left
Bug sample site 3	3013.0		
Underground	3013.7		from 3012.9 m to 3013.7 m, lots of sediment
Underground	3043.6		from 3038.8 m to 3043.6 m, lots of sediment
Underground	3086.8		from 3078.9 m to 3086.8 m, sediment
Tributary	3182.5	0.8	on right
Underground	3195.2		from 3186.9 m to 3195.2 m, sediment
Underground	3277.9		from 3368.2 m to 3277.9 m, sediment

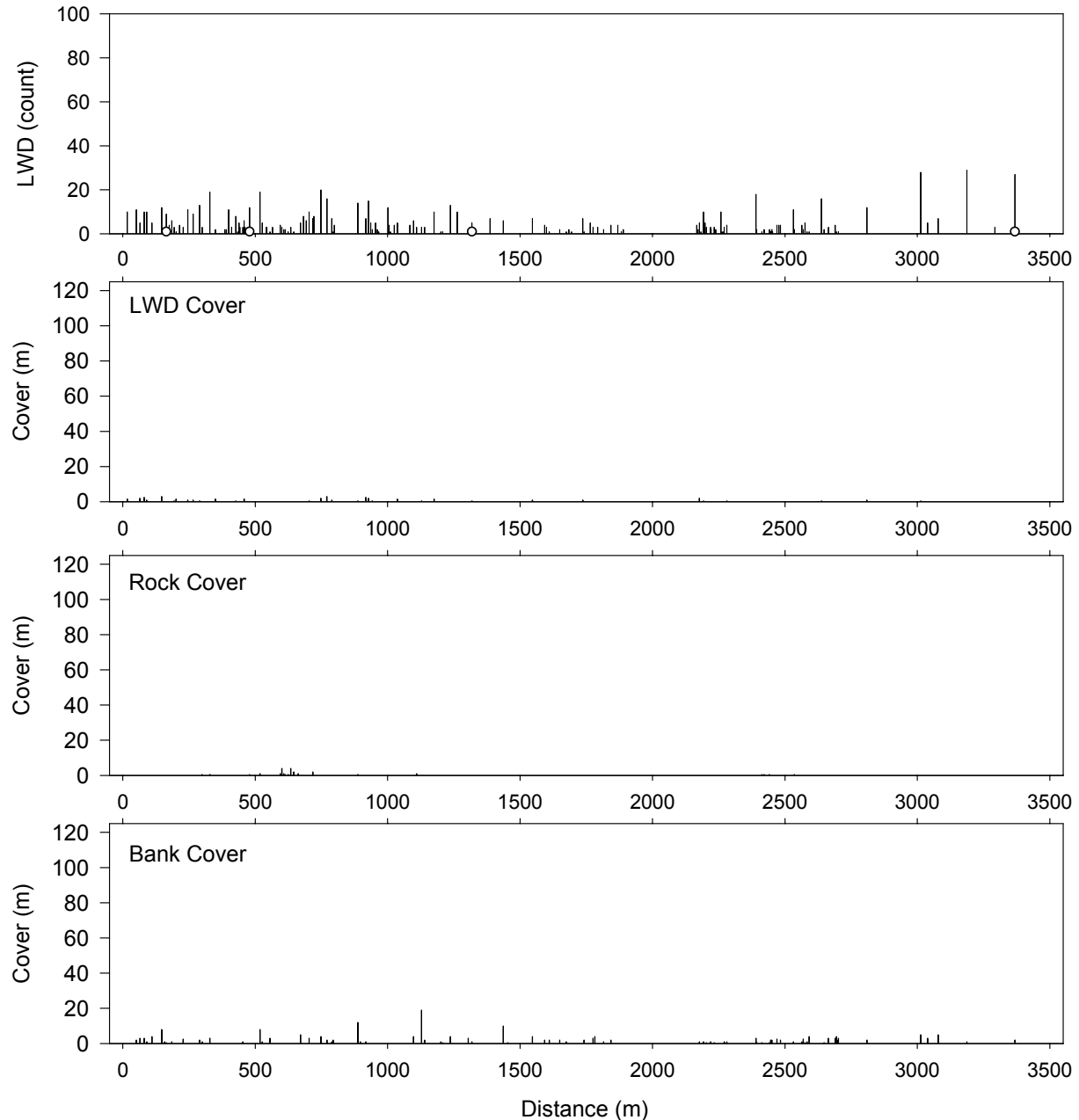


Figure A47. Distribution and abundance of LWD, and distribution of LWD, rock, and bank cover in Gold Mine Branch, summer 2002. LWD and cover were recorded for each habitat unit in the stream. Distance is meters upstream of confluence with Warwoman Creek.

LWD distribution and abundance: Vertical bars indicate total count of LWD. Open circles represent the amount of the total LWD that was >5 m in length, >50 cm in diameter (size 6).

LWD, rock, and bank cover: Cover was defined as linear meters of the cover type within the wetted channel under which a 15 cm long object could be hidden from overhead view. Vertical bars indicate amount of cover in linear meters.

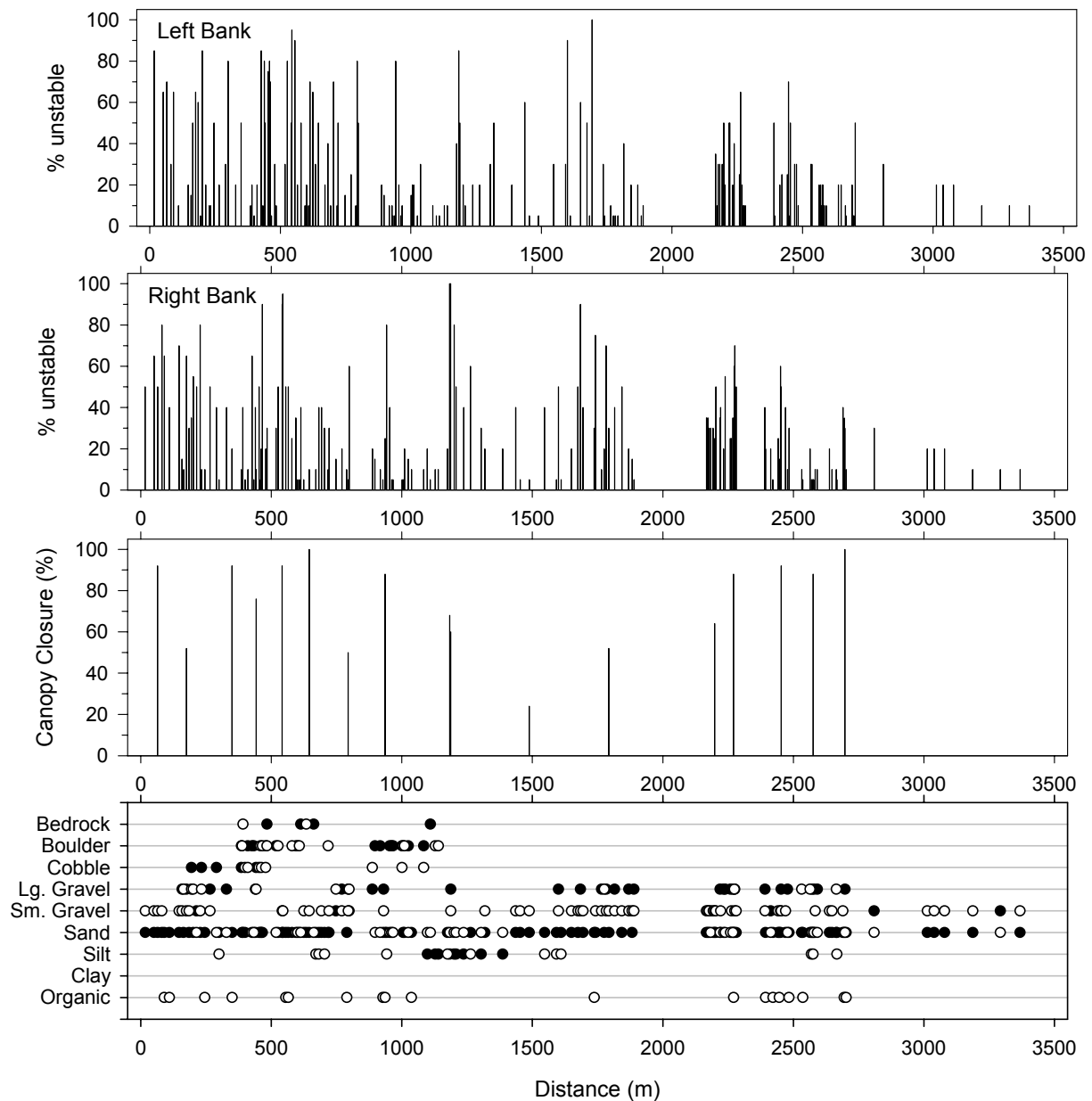


Figure A48. Bank stability, canopy closure and substrate distribution in Gold Mine Branch, summer 2002. Bank stability and substrate were recorded for each habitat unit in the stream. Canopy closure was measured where paired samples were recorded. Distance is meters upstream of confluence with Warwoman Creek.

Bank stability: Left and right bank were recorded as looking upstream. Vertical bars indicate percent of bank identified as unstable.

Canopy closure: Vertical bars indicate percent of canopy closure.

Substrate distribution: Closed circles indicate dominant substrate type, open circles indicate subdominant substrate type.

Table A17. Stream habitat survey summary for Harden Creek, 2002.

Stream:	Harden Creek
District:	Tallulah
USGS Quadrangle:	Tamassee/Satolah
Survey Date:	06/29/02
Downstream Starting Point:	Confluence with Chattooga River
Total Distance Surveyed (km):	1.9

	Pools	Riffles
Percent of Total Stream Area:	30	70
Number:	107	106
Number per km:	55	55
Total Area (m ²):	1948±397	4454±1015
Mean Area (m ²):	18	42
Correction Factor:	0.85	1.02
# of Paired Samples:	10	10
Mean Maximum Depth (cm):	35	24
Mean Average Depth (cm):	16	12
Mean Residual Pool Depth (cm):	5	--
% of Pool Habitat Surveyed as Glides:	0	--
% of Riffle Habitat Surveyed as Runs:	--	16.0
% of Riffle Habitat Surveyed as Cascades:	--	22.6
% Pools with > 35% Embeddedness:	100	--

Large Woody Debris Size	Pieces per km
< 5 m long, 5 cm – 10 cm diameter:	63
< 5 m long, 11-50 cm diameter:	87
< 5 m long, >50 cm diameter:	37
> 5 m long, 5 cm – 10 cm diameter:	17
> 5 m long, 11-50 cm diameter:	32
> 5 m long, >50 cm diameter:	25
Rootwads:	2
Total:	263

Riparian Width	Total Width* (m)	Left & Right Width** (m)
Mean	5	1
Maximum	7	2
75 th Percentile	7	1
25 th Percentile	4	0
Minimum	4	0

*Left riparian, right riparian, and bankfull channel widths were added together for calculations

**Left and right riparian widths were grouped (not added) together for calculations

Other Stream Attributes	
Mean Bankfull Channel Width (m):	13
Mean Channel Gradient (%):	7

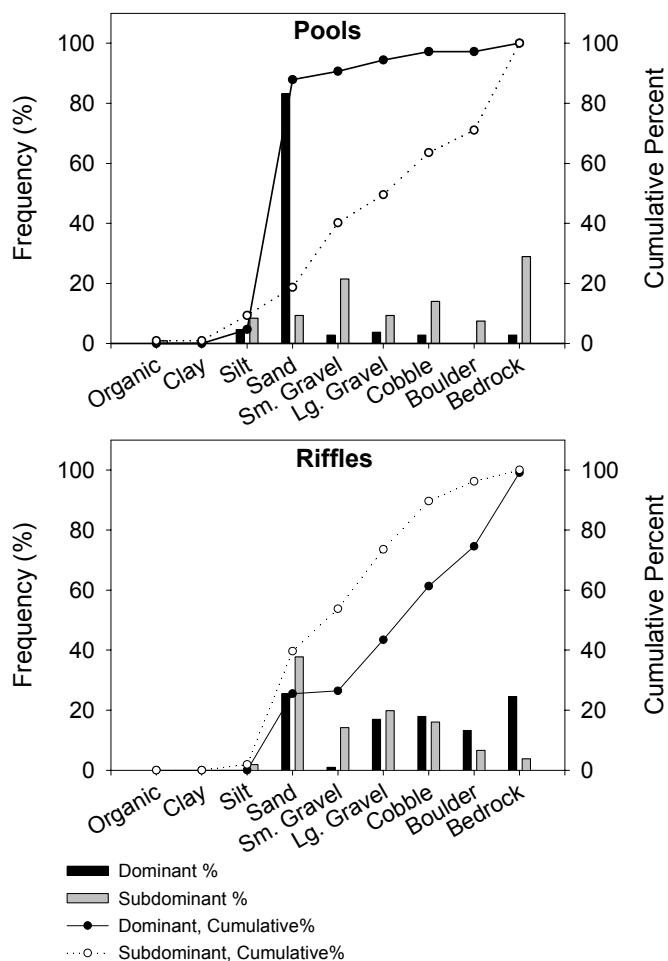


Figure A49. Frequency (percent) and cumulative percent of dominant and subdominant substrate occurrence for pools and riffles in Harden Creek, summer 2002.

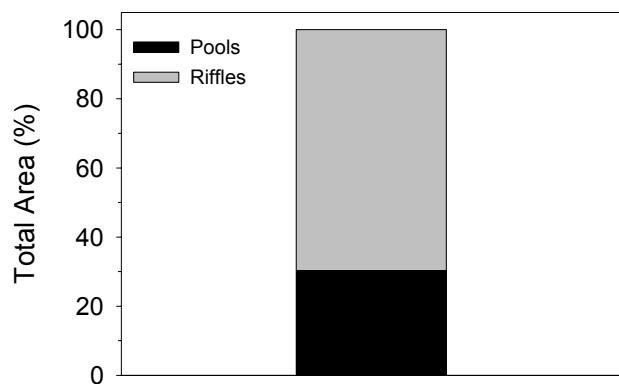


Figure A50. Estimated area of Harden Creek in pools and riffles as calculated using BVET techniques, summer 2002.

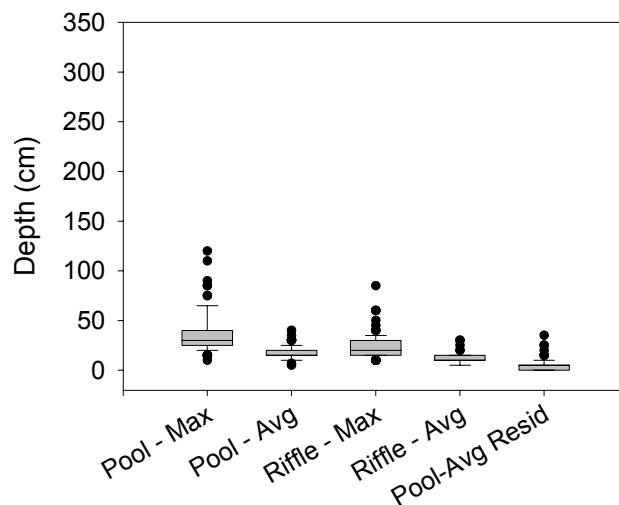


Figure A51. Maximum and average depths and residual pool depths for pools and riffles in Harden Creek, summer 2002. The top and bottom of the boxes represent the 25th and 75th percentiles, the bar in the center of the box represents the median, whiskers represent the 10th and 90th percentiles, and closed circles represent the entire range of the data.

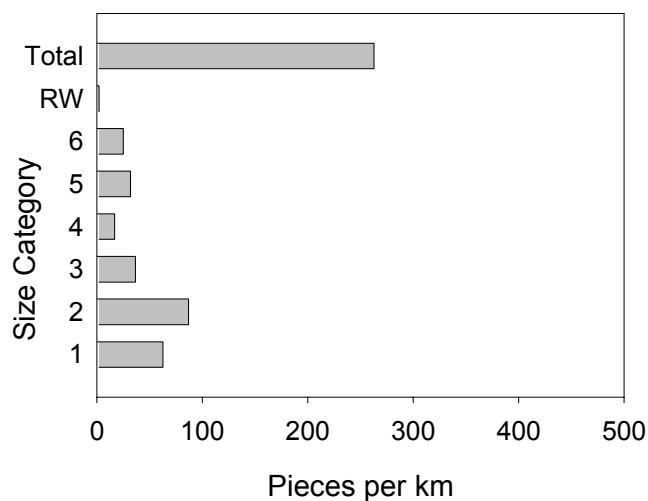


Figure A52. LWD per kilometer in Harden Creek, summer 2002.

Table A18. Stream features found on Harden Creek during BVET habitat survey, summer 2002. Distance is meters from start of survey.

Stream Feature	Distance (m)	Width (m)	Comments
Tributary	59.8	0.8	on left
Tributary	76.9	0.5	on left
Tributary	136.8	1.0	on right, dry
Side Channel In	250.9	2.5	on right
Side Channel Out	294.4	2.5	on right
Tributary	312.8	2.5	on right
Seep	407.5		on left
Tributary	576.9	0.5	on left
Trail Crossing	608.0		old road crossing
Tributary	724.0	2.0	on right
Seep	883.3		on left
Bug sample site 1	896.7		in habitat unit R50
Tributary	1008.2		end survey 7-02-20 raining no longer see creek bed
Tributary	1113.1	1.0	on right
Tributary	1143.3	1.0	on left
Tributary	1178.3	1.0	on left
Tributary	1256.1	0.8	on right
Tributary	1279.1	1.5	on left
Tributary	1312.5	1.0	on left
Tributary	1499.3	0.5	on right
Seep	1551.3		on right
Other	1709.2		debris jam/blowdown couldn't see stream probably a riffle
Seep	1725.8		
Tributary	1773.6	1.5	on left
Seep	1873.2		on left
Seep	1917.7	1.0	on left
Seep	1933.2		on right

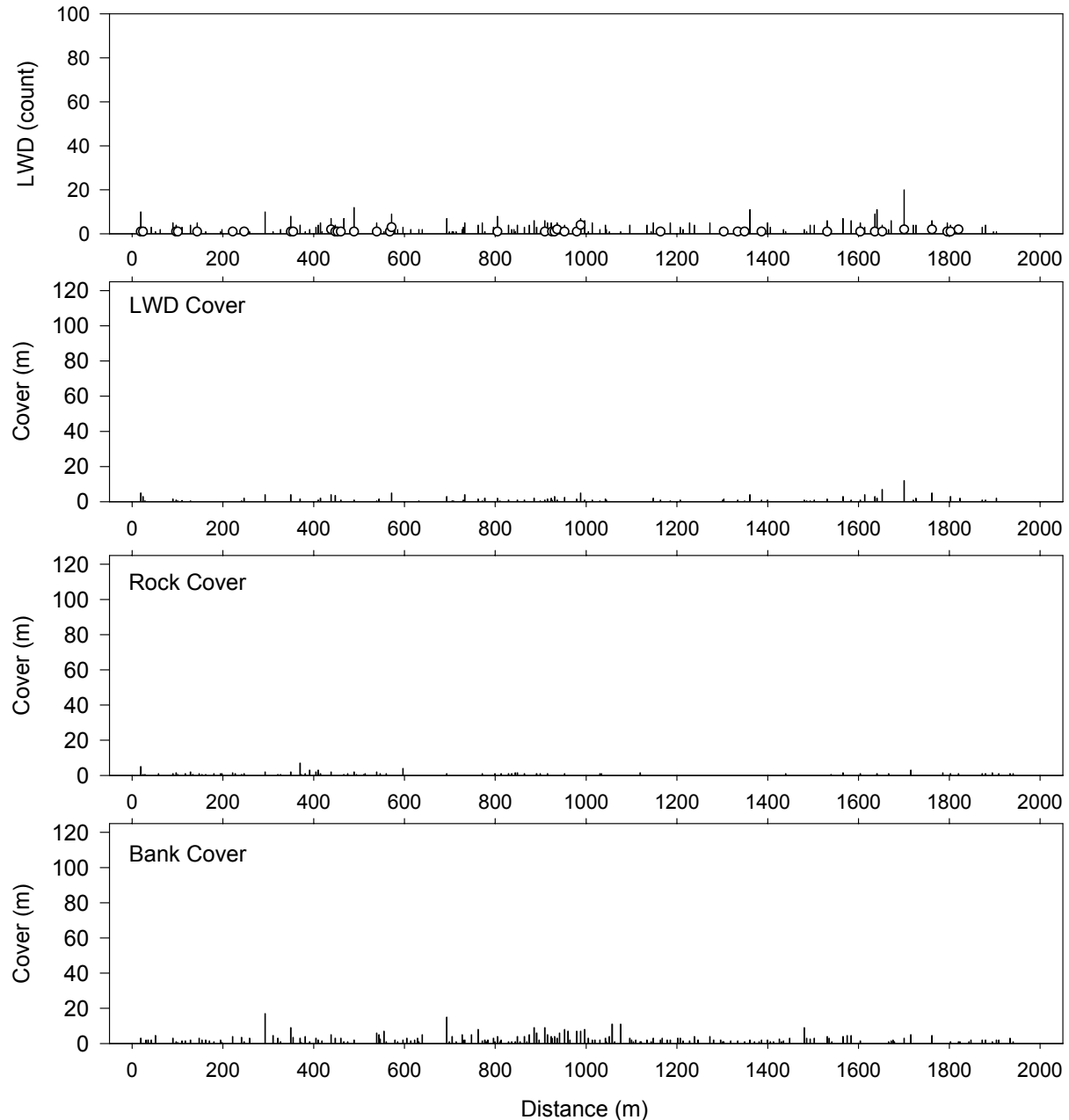


Figure A53. Distribution and abundance of LWD, and distribution of LWD, rock, and bank cover in Harden Creek, summer 2002. LWD and cover were recorded for each habitat unit in the stream. Distance is meters upstream of confluence with Chattooga River.

LWD distribution and abundance: Vertical bars indicate total count of LWD. Open circles represent the amount of the total LWD that was >5 m in length, >50 cm in diameter (size 6).

LWD, rock, and bank cover: Cover was defined as linear meters of the cover type within the wetted channel under which a 15 cm long object could be hidden from overhead view. Vertical bars indicate amount of cover in linear meters.

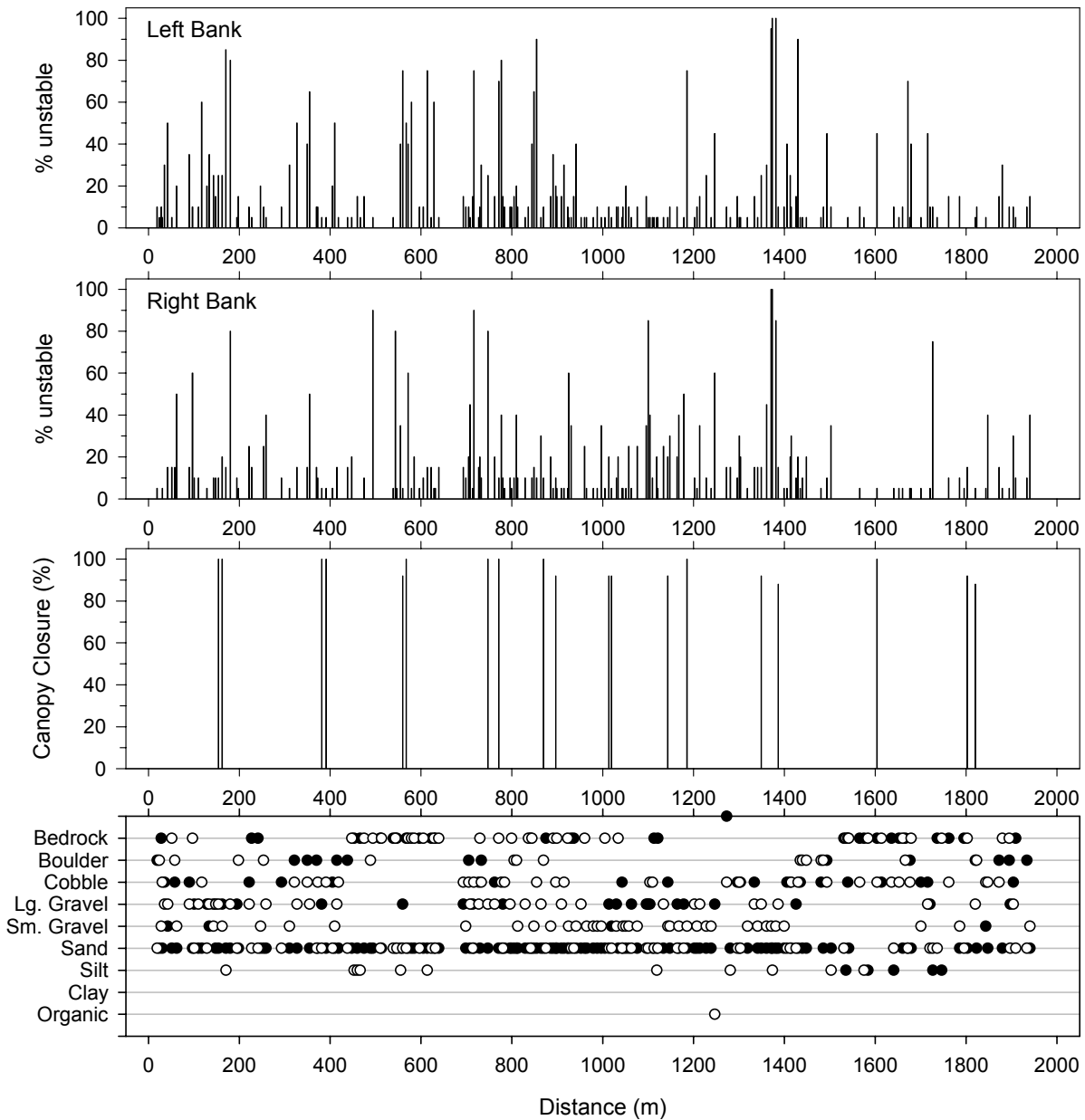


Figure A54. Bank stability, canopy closure and substrate distribution in Harden Creek, summer 2002. Bank stability and substrate were recorded for each habitat unit in the stream. Canopy closure was measured where paired samples were recorded. Distance is meters upstream of confluence with Chattooga River.

Bank stability: Left and right bank were recorded as looking upstream. Vertical bars indicate percent of bank identified as unstable.

Canopy closure: Vertical bars indicate percent of canopy closure.

Substrate distribution: Closed circles indicate dominant substrate type, open circles indicate subdominant substrate type.

Table A19. Stream habitat survey summary for Hedden Creek, 2002.

Stream:	Hedden Creek
District:	Tallulah
USGS Quadrangle:	Satolah
Survey Date:	06/28/02
Downstream Starting Point:	Burrells Ford Road crossing
Total Distance Surveyed (km):	4.3

	Pools	Riffles
Percent of Total Stream Area:	63	37
Number:	270	147
Number per km:	62	34
Total Area (m ²):	12860±935	7571±1341
Mean Area (m ²):	48	52
Correction Factor:	0.99	1.02
# of Paired Samples:	24	14
Mean Maximum Depth (cm):	43	29
Mean Average Depth (cm):	26	16
Mean Residual Pool Depth (cm):	11	--
% of Pool Habitat Surveyed as Glides:	0	--
% of Riffle Habitat Surveyed as Runs:	--	0
% of Riffle Habitat Surveyed as Cascades:	--	3.4
% Pools with > 35% Embeddedness:	92	--

Large Woody Debris Size	Pieces per km
< 5 m long, 5 cm – 10 cm diameter:	97
< 5 m long, 11-50 cm diameter:	126
< 5 m long, >50 cm diameter:	11
> 5 m long, 5 cm – 10 cm diameter:	37
> 5 m long, 11-50 cm diameter:	63
> 5 m long, >50 cm diameter:	7
Rootwads:	3
Total:	344

Riparian Width	Total Width* (m)	Left & Right Width** (m)
Mean	18	2
Maximum	96	5
75 th Percentile	15	2
25 th Percentile	9	1
Minimum	7	0

*Left riparian, right riparian, and bankfull channel widths were added together for calculations

**Left and right riparian widths were grouped (not added) together for calculations

Other Stream Attributes	
Mean Bankfull Channel Width (m):	14
Mean Channel Gradient (%):	5

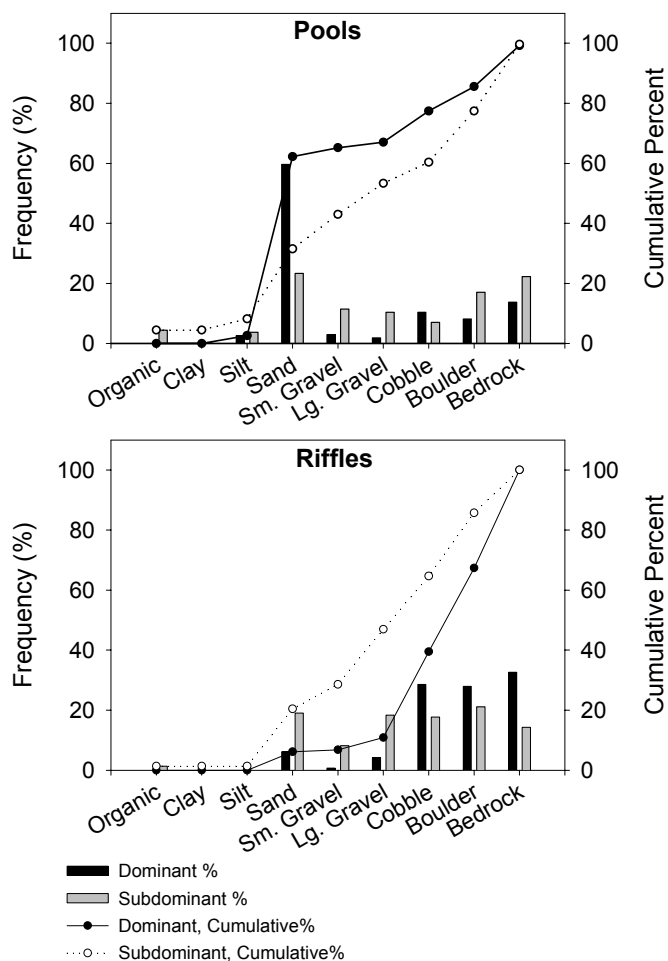


Figure A55. Frequency (percent) and cumulative percent of dominant and subdominant substrate occurrence for pools and riffles in Hedden Creek, summer 2002.

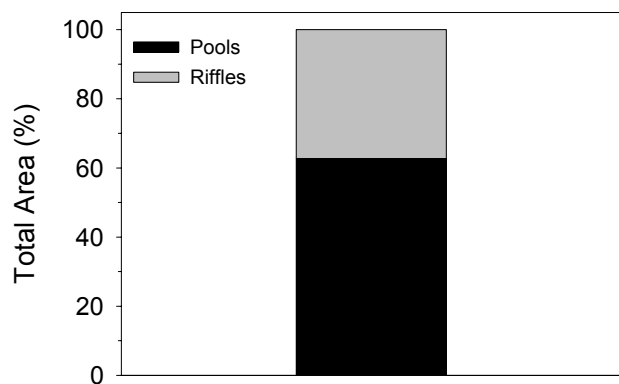


Figure A56. Estimated area of Hedden Creek in pools and riffles as calculated using BVET techniques, summer 2002.

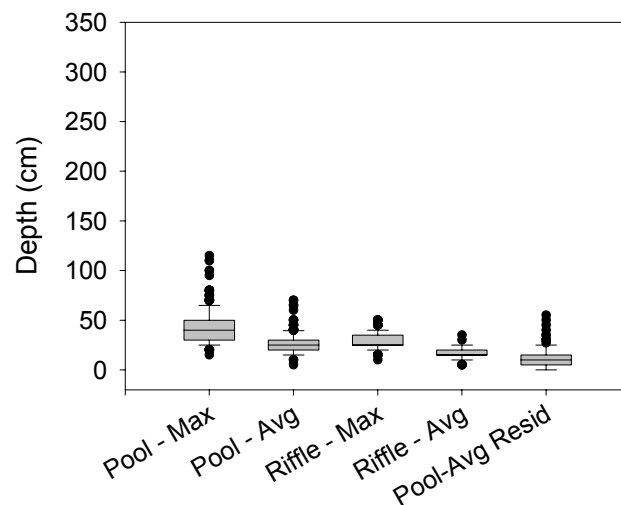


Figure A57. Maximum and average depths and residual pool depths for pools and riffles in Hedden Creek, summer 2002. The top and bottom of the boxes represent the 25th and 75th percentiles, the bar in the center of the box represents the median, whiskers represent the 10th and 90th percentiles, and closed circles represent the entire range of the data.

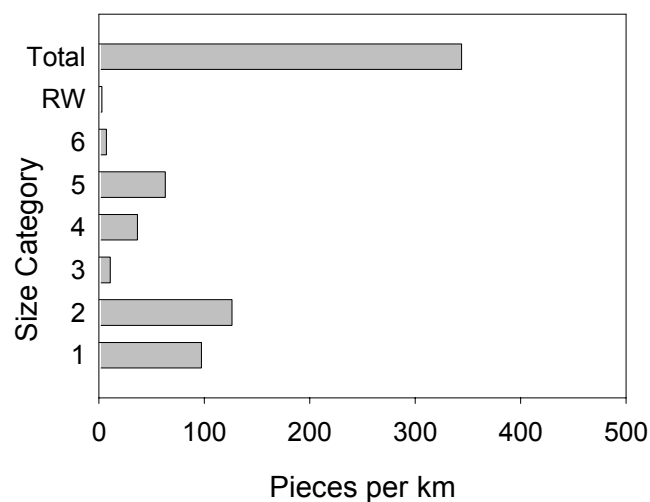


Figure A58. LWD per kilometer in Hedden Creek, summer 2002.

Table A20. Stream features found on Hedden Creek during BVET habitat survey, summer 2002. Distance is meters from start of survey.

Stream Feature	Distance (m)	Width (m)	Comments
Side Channel In	45.0	1.5	on left
Tributary	240.5	3.5	on right Ridley Branch
Tributary	379.6	0.5	on left
Side Channel In	823.9		on left, sandbar present in main channel
Side Channel Out	830.4		on left
Road crossing	893.9		Burrells Ford Road
Side Channel Out	902.2		on left
Tributary	906.2	1.0	on left
Tributary	910.0	0.5	on right
Side Channel In	1082.0		on right
Braid	1172.3		from 1161.1 m to 1172.3 m
Bridge	1248.6		1.5 m above stream eroded banks beneath bridge, unused, broken, not maintained bridge consists of 3 large logs
Tributary	1557.3	0.3	on right
Tributary	1658.7	0.3	on left
Tributary	1732.4	0.5	on left
Tributary	1831.0	0.3	on right
Tributary	1864.9		on left
Tributary	2132.1		on left
Side Channel In	2202.1	3.0	on left
Side Channel Out	2231.5	2.5	on left
Side Channel In	2366.6	1	on left
Side Channel Out	2395.0	1	on left
Tributary	2481.0	1	on right
Culvert	2488.2		6.8 m long, 2 pipes each 1.5 m tall
Tributary	2682.8	2.0	on right
Tributary	2770.3	0.5	on left
Other	3113.5		beaver pond
Other	3157.1		beaver pond
Braid	3157.1		beaver ponds and braid
Other	3337.6		beaver pond
Tributary	3332.6	0.8	on left
Side Channel In	3334.9	0.8	on right couldn't find where side channel exited stream
Other	3383.7		beaver pond
Other	3429.0		beaver pond island in center
Other	3461.5		beaver pond
Other	3385.2		beaver pond
Dam	3501.1		beaver dam
Tributary	3504.4	0.4	on left
Side Channel In	3508.9	2.0	on right
Side Channel Out	3529.8	2.0	on right
Other	3622.5		beaver pond
Tributary	3601.5	0.1	on right
Tributary	3687.9	0.2	on right
Side Channel In	3897.7	0.8	on left
Side Channel Out	3615.8	2.0	on left

Table A20 cont.

Stream Feature	Distance (m)	Width (m)	Comments
Tributary	3987.6	1.5	on left, trickling
Waterfall	4239.2		3.5 m tall
Waterfall	4254.3		approx 70 ft tall
Side Channel In	4336.0		on left
Other	4394.6		beaver pond
Other	4400.6		bug site 5 in beaver pond not sampled heavy siltation and sedimentation knee deep couldn't continue survey
Other			bug site 6, no distinct main channel bug site not sampled
Tributary	5266.3		crosses road

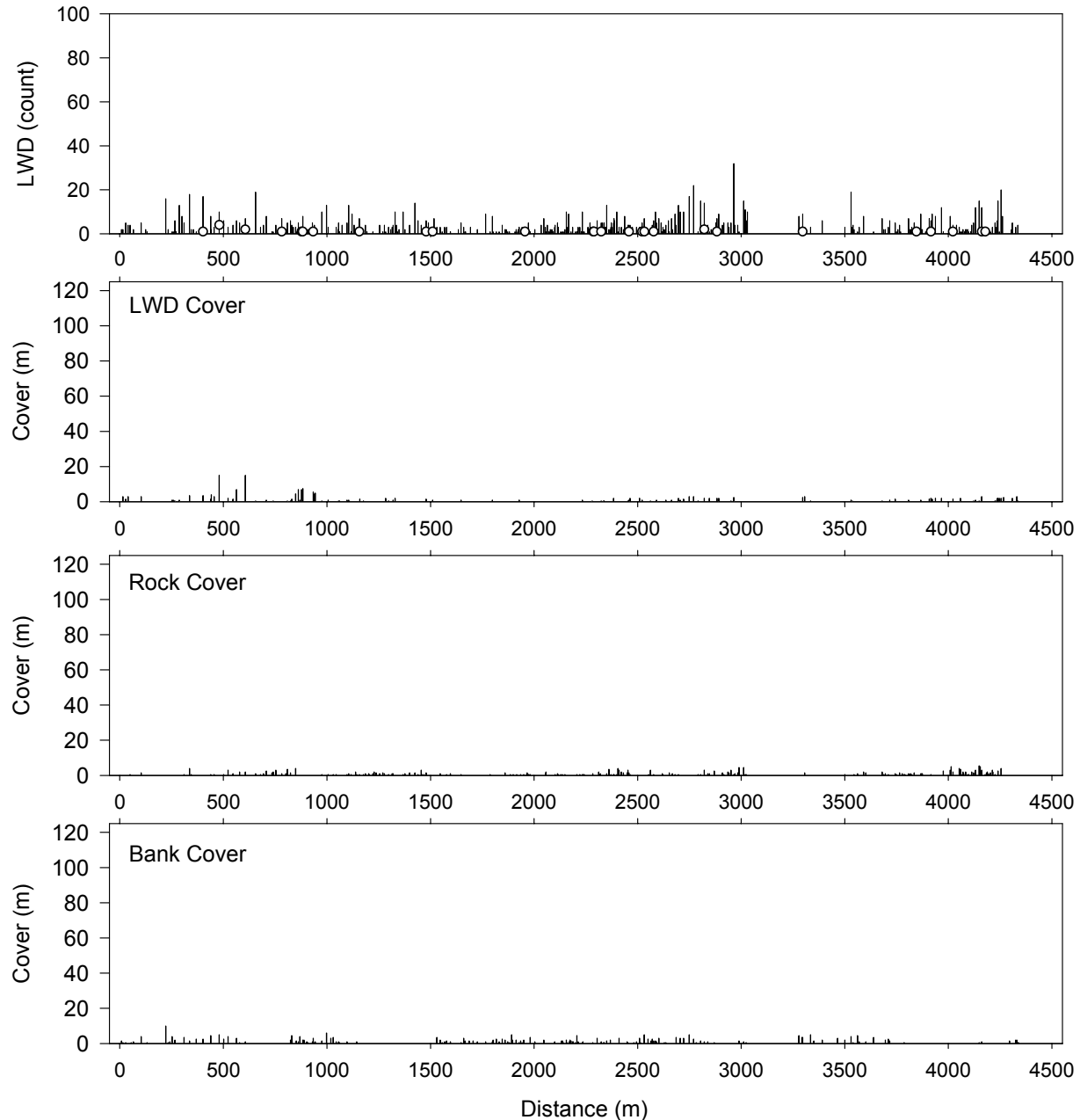


Figure A59. Distribution and abundance of LWD, and distribution of LWD, rock, and bank cover in Hedden Creek, summer 2002. LWD and cover were recorded for each habitat unit in the stream. Distance is meters upstream of Burrells Ford Road crossing.

LWD distribution and abundance: Vertical bars indicate total count of LWD. Open circles represent the amount of the total LWD that was >5 m in length, >50 cm in diameter (size 6).

LWD, rock, and bank cover: Cover was defined as linear meters of the cover type within the wetted channel under which a 15 cm long object could be hidden from overhead view. Vertical bars indicate amount of cover in linear meters.

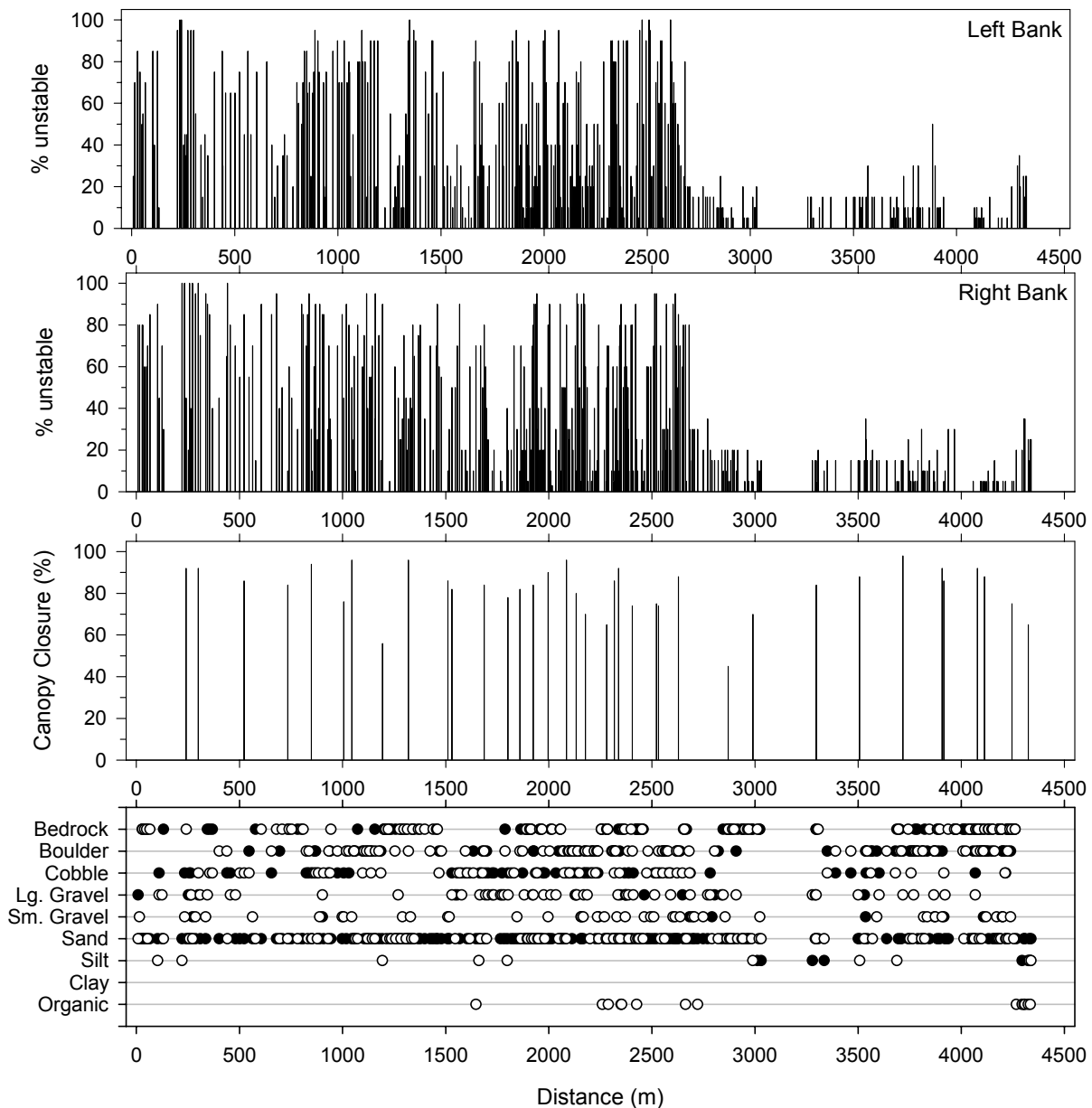


Figure A60. Bank stability, canopy closure and substrate distribution in Hedden Creek, summer 2002. Bank stability and substrate were recorded for each habitat unit in the stream. Canopy closure was measured where paired samples were recorded. Distance is meters upstream of Burrells Ford Road crossing.

Bank stability: Left and right bank were recorded as looking upstream. Vertical bars indicate percent of bank identified as unstable.

Canopy closure: Vertical bars indicate percent of canopy closure.

Substrate distribution: Closed circles indicate dominant substrate type, open circles indicate subdominant substrate type.

Table A21. Stream habitat survey summary for Pounding Mill Creek, 2002.

Stream:	Pounding Mill Creek
District:	Tallulah
USGS Quadrangle:	Satolah/Rabun Bald
Survey Date:	05/20/02
Downstream Starting Point:	USFS Boundary upstream county road S884 crossing
Total Distance Surveyed (km):	5.5

	Pools	Riffles
Percent of Total Stream Area:	7	93
Number:	79	121
Number per km:	14	22
Total Area (m ²):	1054±5426	14571±4009
Mean Area (m ²):	13	120
Correction Factor:	0.37	1.16
# of Paired Samples:	8	11
Mean Maximum Depth (cm):	40	34
Mean Average Depth (cm):	24	17
Mean Residual Pool Depth (cm):	7	--
% of Pool Habitat Surveyed as Glides:	11	--
% of Riffle Habitat Surveyed as Runs:	--	0
% of Riffle Habitat Surveyed as Cascades:	--	14.0
% Pools with > 35% Embeddedness:	96	--

Large Woody Debris Size	Pieces per km
< 5 m long, 5 cm – 10 cm diameter:	79
< 5 m long, 11-50 cm diameter:	93
< 5 m long, >50 cm diameter:	2
> 5 m long, 5 cm – 10 cm diameter:	36
> 5 m long, 11-50 cm diameter:	35
> 5 m long, >50 cm diameter:	3
Rootwads:	1
Total:	250

Riparian Width	Total Width* (m)	Left & Right Width** (m)
Mean	21	8
Maximum	107	100
75 th Percentile	18	5
25 th Percentile	9	1
Minimum	4	0

*Left riparian, right riparian, and bankfull channel widths were added together for calculations

**Left and right riparian widths were grouped (not added) together for calculations

Other Stream Attributes	
Mean Bankfull Channel Width (m):	5
Mean Channel Gradient (%):	7

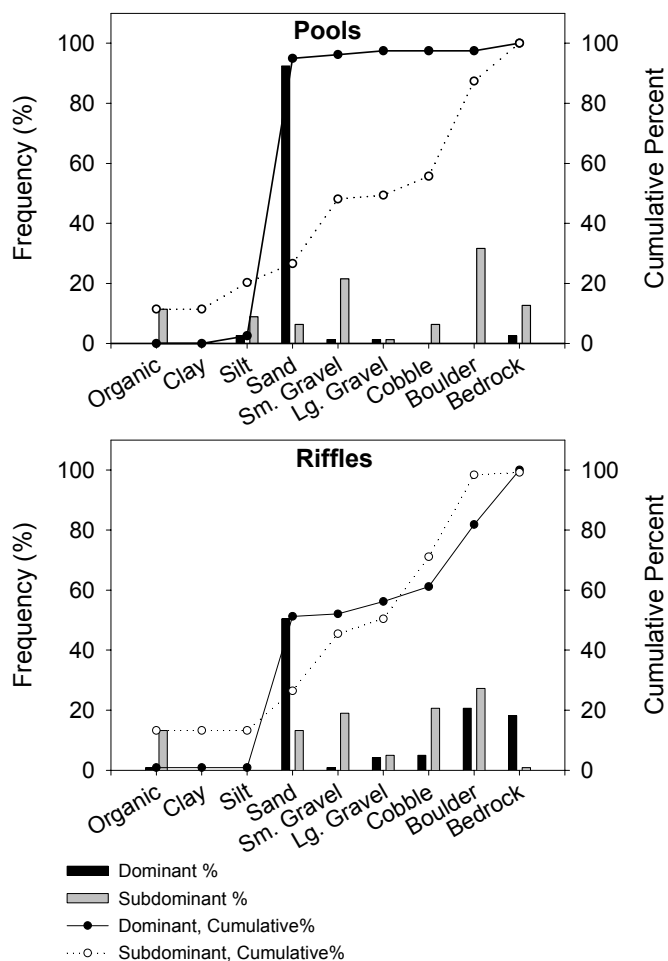


Figure A61. Frequency (percent) and cumulative percent of dominant and subdominant substrate occurrence for pools and riffles in Pounding Mill Creek, summer 2002.

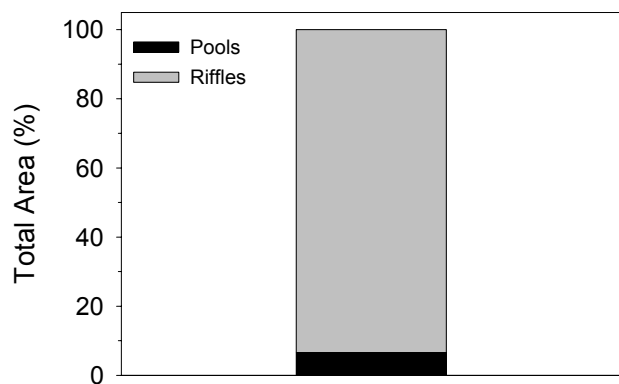


Figure A62. Estimated area of Pounding Mill Creek in pools and riffles as calculated using BVET techniques, summer 2002.

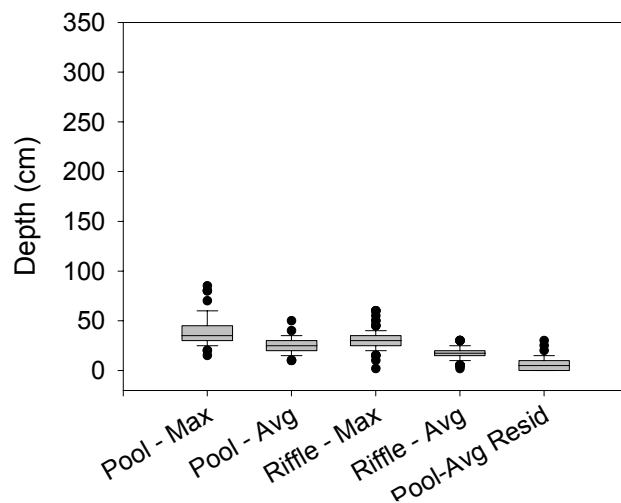


Figure A63. Maximum and average depths and residual pool depths for pools and riffles in Pounding Mill Creek, summer 2002. The top and bottom of the boxes represent the 25th and 75th percentiles, the bar in the center of the box represents the median, whiskers represent the 10th and 90th percentiles, and closed circles represent the entire range of the data.

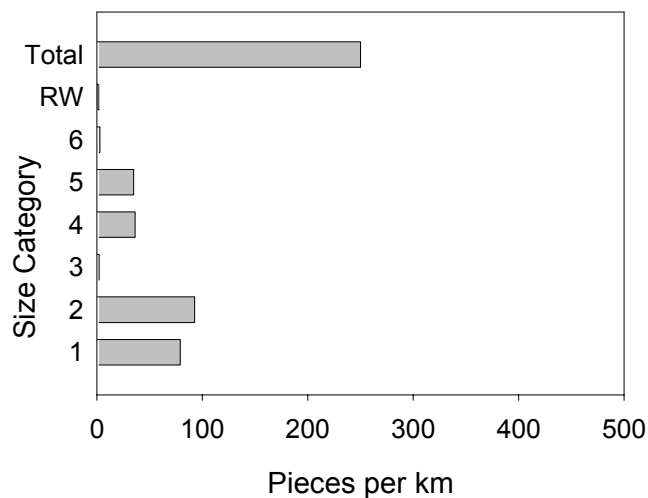


Figure A64. LWD per kilometer in Pounding Mill Creek, summer 2002.

Table A22. Stream features found on Pounding Mill Creek during BVET habitat survey, summer 2002. Distance is meters from start of survey.

Stream Feature	Distance (m)	Width (m)	Comments
Side Channel In	229.1	2.0	on left
Tributary	383.5		on left
Side Channel In	520.4		on right
Side Channel Out	524.7		on right
Bug sample site 1	731.0		
Tributary	764.3		on right, approx 20m up trib seep/springhead
Other	854.0		small spring/seep on right
Tributary	912.2		on left
Tributary	973.0		on left
Tributary	1010.5	1.5	on right, steep and cascading over boulder and bedrock
Braid	1339.8		from 1325.9 m to 1339.8 m heavy sedimentation and detritus
Side Channel In	1369.7	1.0	on right
Side Channel Out	1410.7	0.3	on right, small spring runs into side channel
Waterfall	1467.7		1.3 m tall
Tributary	1568.9	0.1	cascading from large rock overhang
Waterfall	1569.4		3 m tall
Tributary	1780.2	0.5	on right
Tributary	1838.3	0.8	on right
Bug sample site 2	2147.4		in habitat unit R52
Tributary	2296.9	0.3	on left
Tributary	2339.4	1.0	on right, from spring at 2366.9m
Culvert	2448.5	1.3	8.1m long FS road 86C Totterpole Rd active construction occurring on road (spreading gravel), poor runoff and sedimentation control gully flowing directly into stream
Tributary	2540.6	1.0	on right, enters at 2 places
Tributary	2591.7	0.5	on right
Dam	2613.6		25 cm tall, man-made log and cobble dam to prevent movement of fish downstream. A local says he feeds the trout in the pool created by dam.
Culvert	2635.5		from 2635.5 m to 2640.1 m 4.6 m long 1.25 m diameter metal pipe laid stones around culvert ends trails lead to cabins, possibly Hale Ridge Rd
Bug sample site 3	2691.0		in habitat unit R62
Tributary	2702.7	0.3	on left
Bridge	2713.0		.5 m tall, 3.5 m wide foot trail
Tributary	2716.9	0.5	on right
Dam	2727.3		.2 m tall, 3 m wide, man-made cobble and gravel to prevent movement by trout possibly
Culvert	2790.7		6.1 m long, 2 .85 m diameter pipes in stone bridge
Tributary	2803.8	0.1	on left, man-made banks flows from a cabin
Bridge	2892.8	3.0	.5 m tall, foot trail
Tributary	2942.0	1.3	on left
Side Channel In	3003.0	1.5	on right
Tributary	3003.5	0.5	on left from spring
Side Channel Out	3018.0	1.5	on right

Table A22. cont.

Stream Feature	Distance (m)	Width (m)	Comments
Side Channel In	3055.2	2.0	on right
Side Channel Out	3065.2	1.0	on right
Waterfall	3144.6		4 m tall
Tributary	3144.9	0.5	on right
Tributary	3325.0	1.5	on left
Tributary	3337.9	1.0	on right
Bridge	3495.2	1.5	1.85 m tall, 7 m wide, Hales Ridge road, creek channelized under and around bridge
Tributary	3563.0	1.5	on right, through a culvert
Waterfall	3566.0		1.25 m tall
Trail Crossing	3596.9		
Side Channel In	3690.2	1.5	on left
Side Channel Out	3708.8	1.5	on left
Bug sample site 4	3731.0		
Side Channel In	3766.6	1.5	on left
Side Channel Out	3773.2		on left
Braid	3854.6		from 3837.4 m to 3854.6 m
Waterfall	3936.3		1 m tall
Tributary	3987.7	0.8	on left, braided where it enters stream
Side Channel In	4021.0	1.0	on right
Side Channel Out	4039.7	1.0	on right
Tributary	4119.4	0.8	on left
Side Channel	4160.8		
Tributary	4202.9	0.3	on left
Braid	4280.5		from 4253.1 m to 4280.5 m
Side Channel In	4349.0	1.0	on left
Side Channel Out	4398.9		on left, seeping underground
Underground	4374.9		from 4272.7 m to 4374.9 m, soft substrate, sandbar to left
Side Channel In	4466.6		on right, underground at places
Side Channel Out	4499.9		on right
Tributary	4507.4	1.0	on left, probably spring fed
Waterfall	4563.7		4.2 m tall
Side Channel In	4586.1	1.0	on left
Side Channel Out	4605.2		on left
Waterfall	4587.1		1.0 m tall
Culvert	4689.2	0.8	from 4689.2 m to 4694.1 m 75 cm diameter metal pipe road closed sign
Bug sample site 5	4731.0		
Tributary	4694.1	1.0	on right, just upstream of road and culvert
Tributary	4742.3	0.5	on right
Side Channel In	4890.0		on right, couldn't find where side channel exits
Side Channel In	5007.5	1.3	probably underground, side channel dry in spots
Side Channel Out	5038.8		on right
Side Channel In	5017.9		on left, dry not flowing in spots, ends at 5035.1 m
Side Channel In	5066.4		on right, couldn't find where exits main channel
Side Channel In	5108.6		on right, low flow goes underground
Tributary	5167.7		on left

Table A22. cont.

Stream Feature	Distance (m)	Width (m)	Comments
Side Channel In	5191.3		on right
Tributary	5221.7		on right
Underground	5227.5		from 5225.0 m to 5227.5 m, soft substrate hard lower banks
Tributary	5247.8		on left, partly underground
Tributary	5283.8	0.5	on left
Tributary	5299.7	0.8	on left
Underground	5377.8		from 5357.2 m to 5377.8 m, stream goes into bank
Tributary	5387.6	0.8	on right
Tributary	5397.0	0.8	on left
Tributary	5407.0	1.0	on right
Underground	5515.1		from 5437.0 m to 5515.1 m

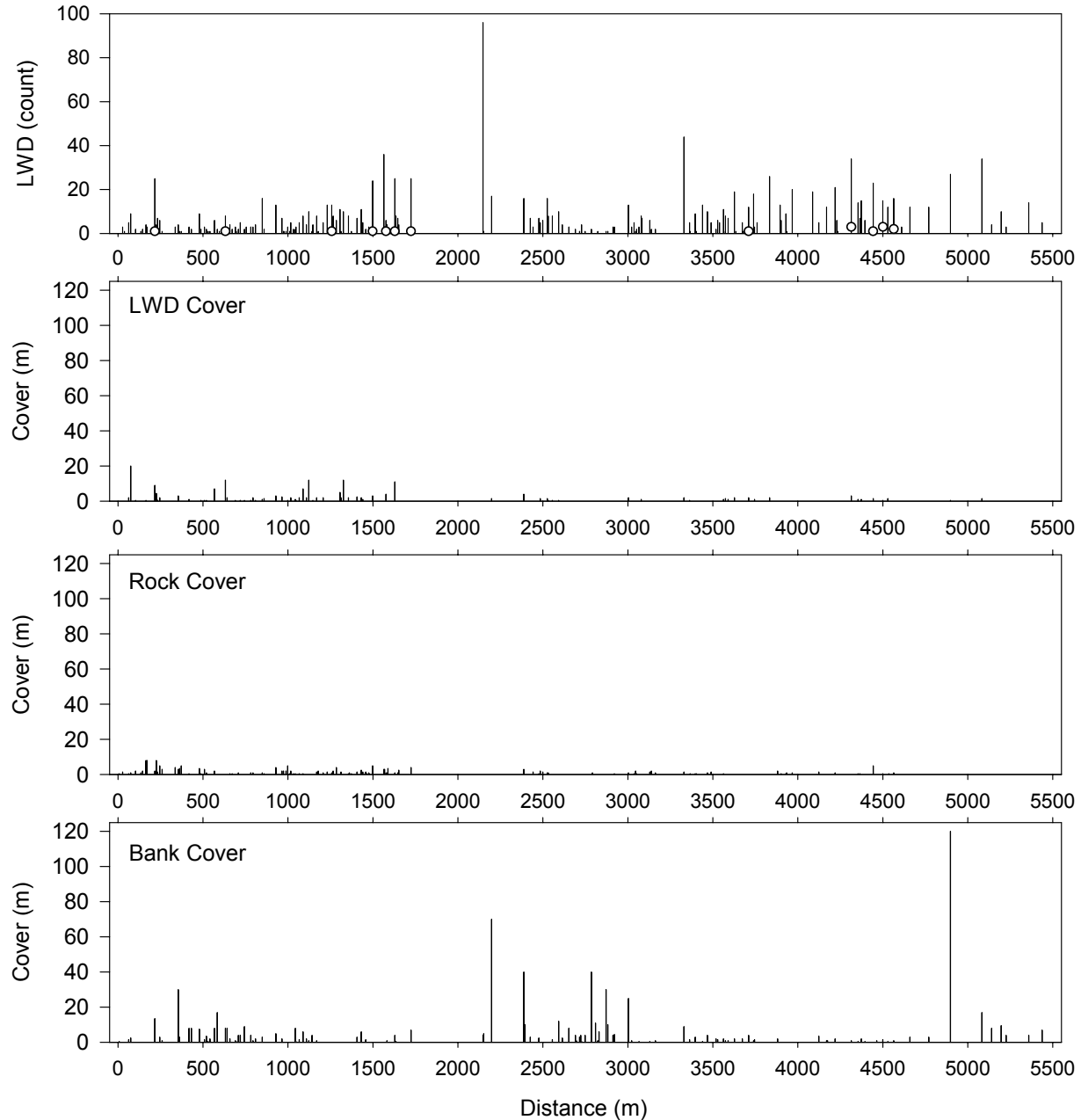


Figure A65. Distribution and abundance of LWD, and distribution of LWD, rock, and bank cover in Pounding Mill Creek, summer 2002. LWD and cover were recorded for each habitat unit in the stream. Distance is meters upstream of USFS Boundary.

LWD distribution and abundance: Vertical bars indicate total count of LWD. Open circles represent the amount of the total LWD that was >5 m in length, >50 cm in diameter (size 6).

LWD, rock, and bank cover: Cover was defined as linear meters of the cover type within the wetted channel under which a 15 cm long object could be hidden from overhead view. Vertical bars indicate amount of cover in linear meters.

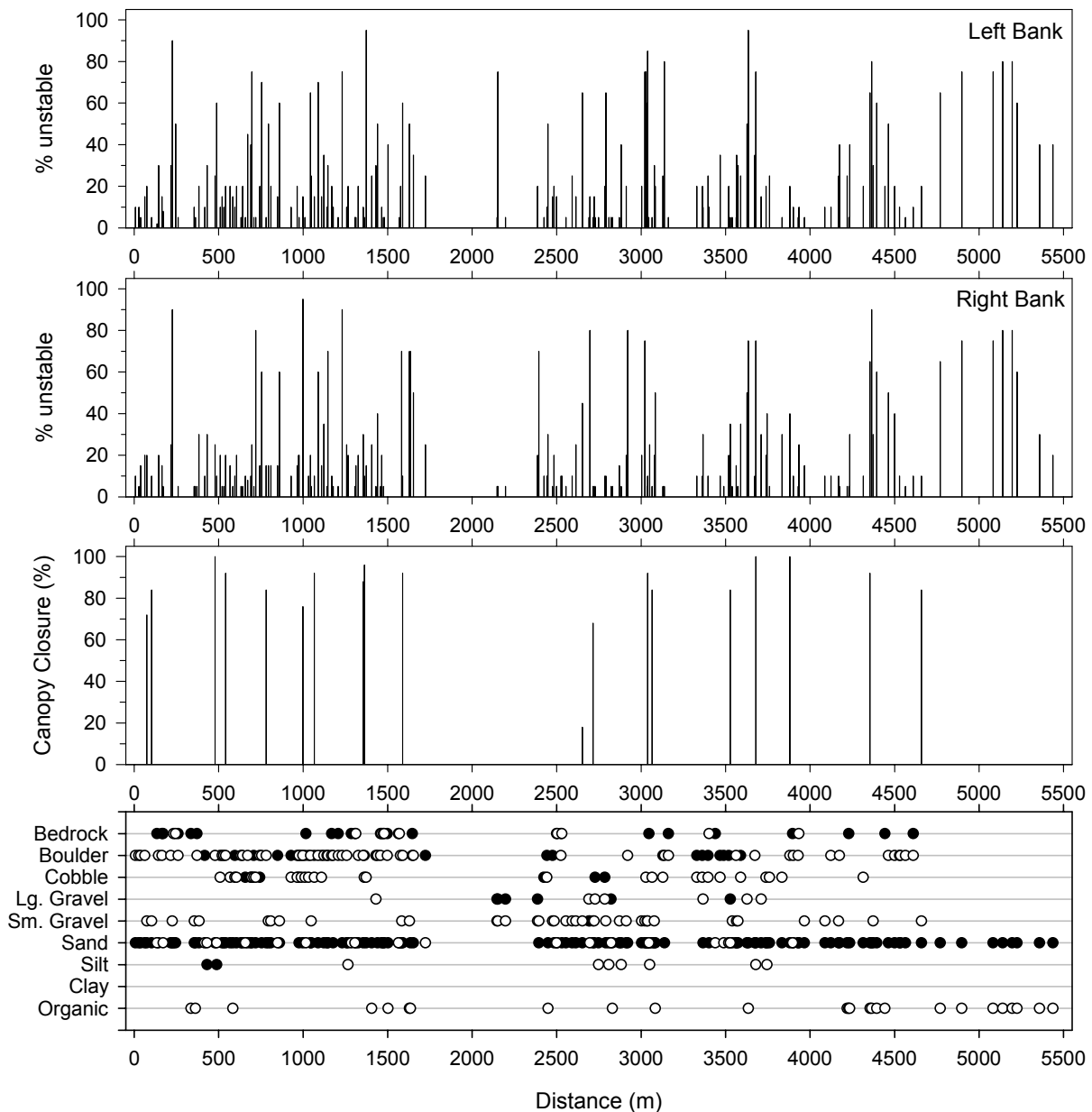


Figure A66. Bank stability, canopy closure and substrate distribution in Pounding Mill Creek, summer 2002. Bank stability and substrate were recorded for each habitat unit in the stream. Canopy closure was measured where paired samples were recorded. Distance is meters upstream of USFS Boundary.

Bank stability: Left and right bank were recorded as looking upstream. Vertical bars indicate percent of bank identified as unstable.

Canopy closure: Vertical bars indicate percent of canopy closure.

Substrate distribution: Closed circles indicate dominant substrate type, open circles indicate subdominant substrate type.

Table A23. Stream habitat survey summary for Ridley Branch, 2002.

Stream:	Ridley Branch
District:	Tallulah
USGS Quadrangle:	Satolah
Survey Date:	07/11/02
Downstream Starting Point:	Confluence with Hedden Creek
Total Distance Surveyed (km):	1.6

	Pools	Riffles
Percent of Total Stream Area:	33	67
Number:	92	99
Number per km:	56	61
Total Area (m ²):	1375±206	2847±175
Mean Area (m ²):	15	29
Correction Factor:	0.71	0.88
# of Paired Samples:	9	10
Mean Maximum Depth (cm):	26	15
Mean Average Depth (cm):	14	9
Mean Residual Pool Depth (cm):	4	--
% of Pool Habitat Surveyed as Glides:	0.0	--
% of Riffle Habitat Surveyed as Runs:	--	17.2
% of Riffle Habitat Surveyed as Cascades:	--	4.0
% Pools with > 35% Embeddedness:	100	--

Large Woody Debris Size	Pieces per km
< 5 m long, 5 cm – 10 cm diameter:	48
< 5 m long, 11-50 cm diameter:	64
< 5 m long, >50 cm diameter:	21
> 5 m long, 5 cm – 10 cm diameter:	7
> 5 m long, 11-50 cm diameter:	15
> 5 m long, >50 cm diameter:	12
Rootwads:	3
Total:	170

Riparian Width	Total Width* (m)	Left & Right Width** (m)
Mean	4	0
Maximum	7	4
75 th Percentile	4	0
25 th Percentile	3	0
Minimum	3	0

*Left riparian, right riparian, and bankfull channel widths were added together for calculations

**Left and right riparian widths were grouped (not added) together for calculations

Other Stream Attributes	
Mean Bankfull Channel Width (m):	3
Mean Channel Gradient (%):	3

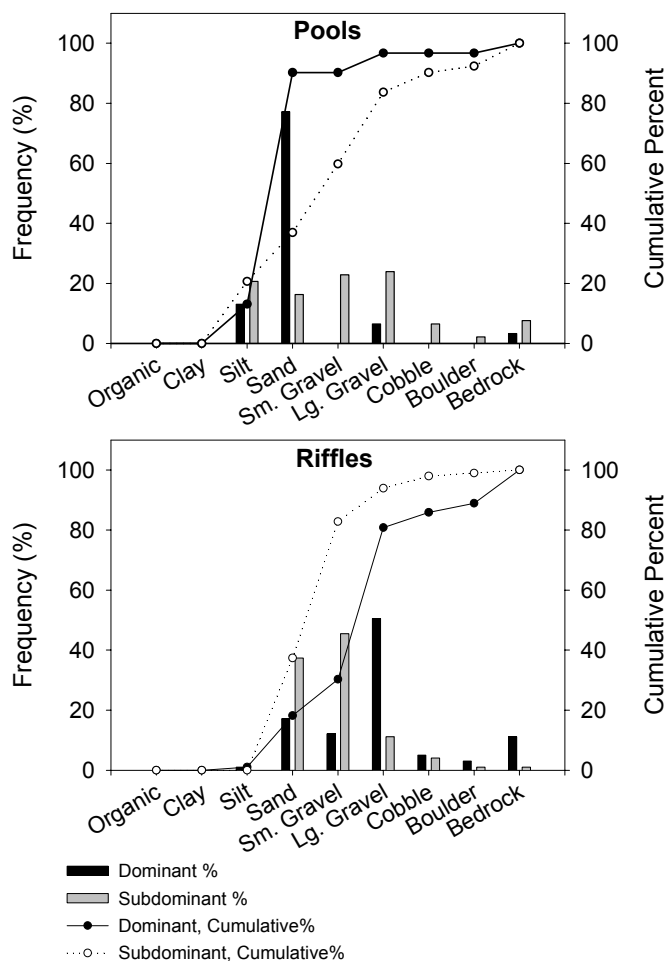


Figure A67. Frequency (percent) and cumulative percent of dominant and subdominant substrate occurrence for pools and riffles in Ridley Branch, summer 2002.

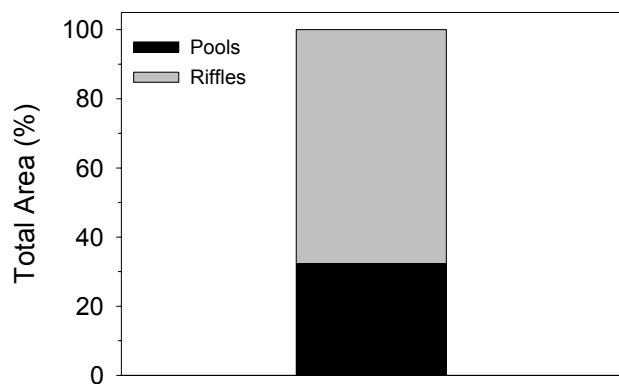


Figure A68. Estimated area of Ridley Branch in pools and riffles as calculated using BVET techniques, summer 2002.

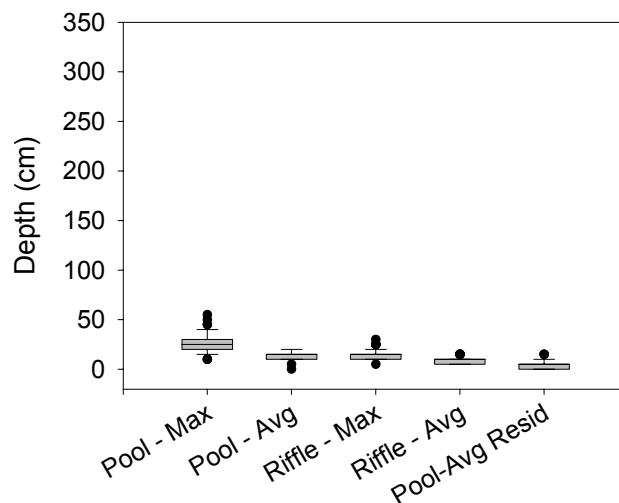


Figure A69. Maximum and average depths and residual pool depths for pools and riffles in Ridley Branch, summer 2002. The top and bottom of the boxes represent the 25th and 75th percentiles, the bar in the center of the box represents the median, whiskers represent the 10th and 90th percentiles, and closed circles represent the entire range of the data.

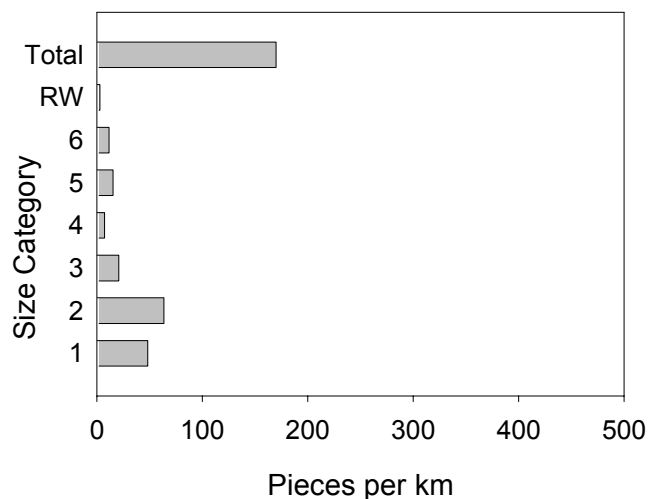


Figure A70. LWD per kilometer in Ridley Branch, summer 2002.

Table A24. Stream features found on Ridley Branch during BVET habitat survey, summer 2002. Distance is meters from start of survey.

Stream Feature	Distance (m)	Width (m)	Comments
Tributary	103.2	0.5	in on left, flowing across road
Other	105.6	10.5	road crossing through creek
Tributary	335.6	0.5	in on right, dry
Tributary	340.5	0.8	in on left
Tributary	413.1	1.5	in on right, almost dry
Seep	436.1		in on right
Side Channel In	478.4	2.0	on left
Seep	504.9		in on right
Side Channel Out	509.5		on left
Seep	537.2		in on left
Bug sample site 1	611.5		in habitat unit R41
Tributary	799.3	2.0	in on right
Tributary	825.3	1.0	in on right
Seep	825.8		in on left
Tributary	950.2	2.0	in on left
Seep	976.1		in on right
Tributary	1005.8	1.5	in on right
Tributary	1122.0	1.0	in on left
Tributary	1271.4	0.8	in on right
Seep	1325.0		in on left
Tributary	1422.1	2.0	in on left, almost dry
Seep	1448.0		in on left
Side Channel Out	1514.8		on right
Seep	1615.0		in on right

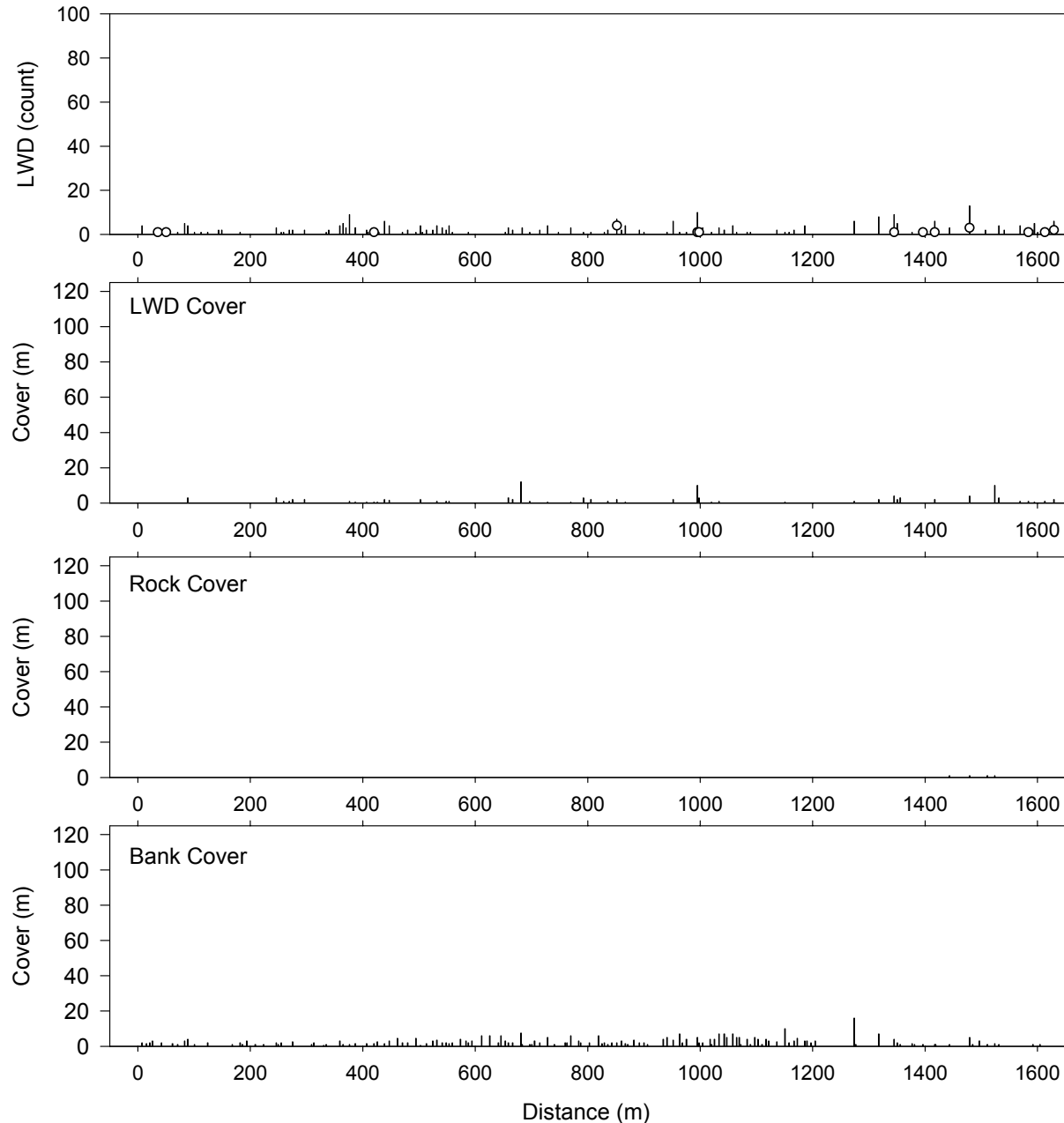


Figure A71. Distribution and abundance of LWD, and distribution of LWD, rock, and bank cover in Ridley Branch, summer 2002. LWD and cover were recorded for each habitat unit in the stream. Distance is meters upstream of confluence with Hedden Creek.

LWD distribution and abundance: Vertical bars indicate total count of LWD. Open circles represent the amount of the total LWD that was >5 m in length, >50 cm in diameter (size 6).

LWD, rock, and bank cover: Cover was defined as linear meters of the cover type within the wetted channel under which a 15 cm long object could be hidden from overhead view. Vertical bars indicate amount of cover in linear meters.

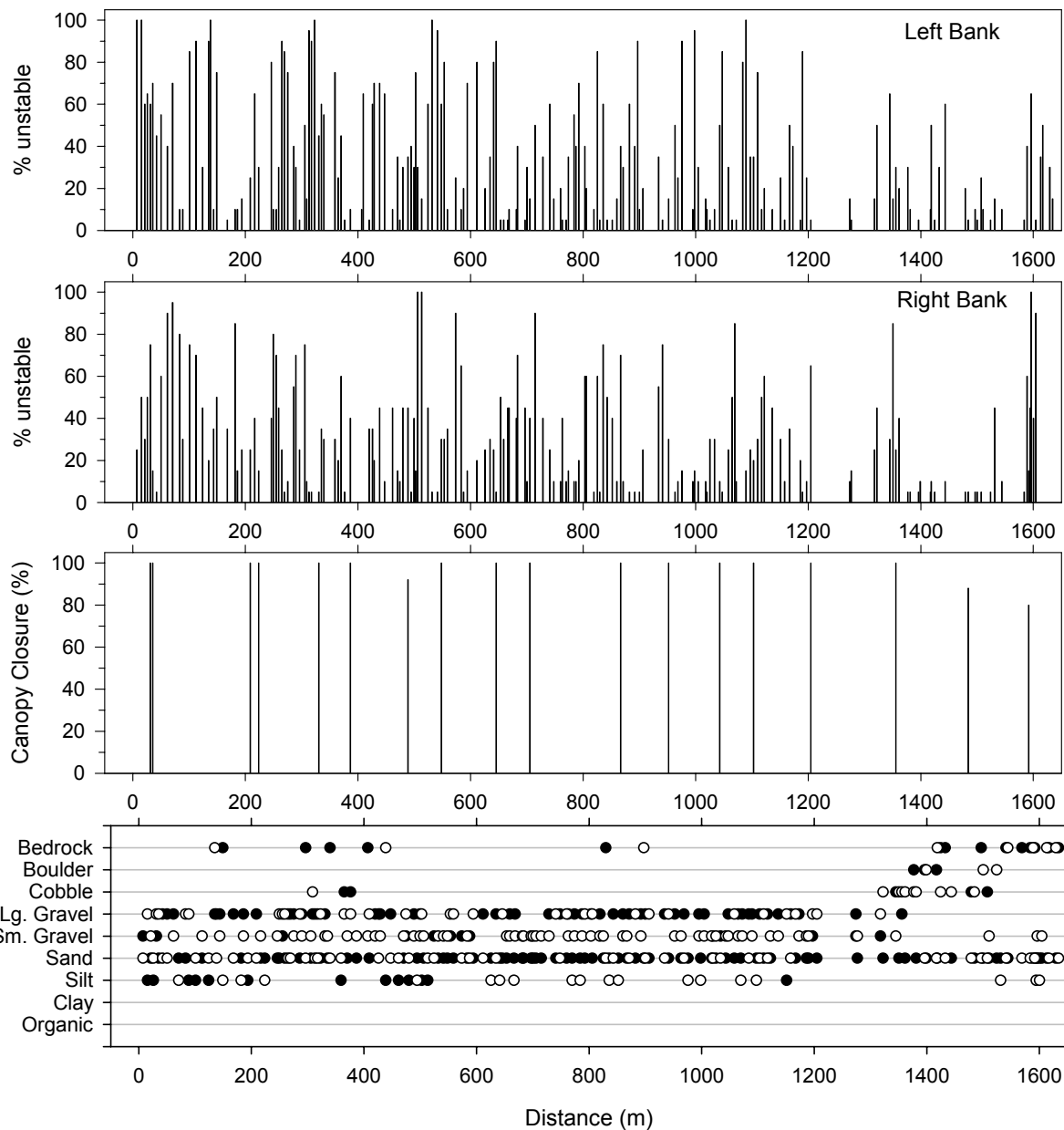


Figure A72. Bank stability, canopy closure and substrate distribution in Ridley Branch, summer 2002. Bank stability and substrate were recorded for each habitat unit in the stream. Canopy closure was measured where paired samples were recorded. Distance is meters upstream of confluence with Hedden Creek.

Bank stability: Left and right bank were recorded as looking upstream. Vertical bars indicate percent of bank identified as unstable.

Canopy closure: Vertical bars indicate percent of canopy closure.

Substrate distribution: Closed circles indicate dominant substrate type, open circles indicate subdominant substrate type.

Table A25. Stream habitat survey summary for Conasauga River, 2002.

Stream:	Conasauga River
District:	Armuchee-Cohutta
USGS Quadrangle:	N/A
Survey Date:	06/01/02
Downstream Starting Point:	Lower Cohutta Wilderness Boundary
Total Distance Surveyed (km):	17.9

	Pools	Riffles
Percent of Total Stream Area:	68	32
Number:	637	290
Number per km:	36	16
Total Area (m ²):	128592±10794	59394±2601
Mean Area (m ²):	202	205
Correction Factor:	1.01	1.11
# of Paired Samples:	61	27
Mean Maximum Depth (cm):	76	50
Mean Average Depth (cm):	45	29
Mean Residual Pool Depth (cm):	16	--
% of Pool Habitat Surveyed as Glides:	0.0	--
% of Riffle Habitat Surveyed as Runs:	--	1.4
% of Riffle Habitat Surveyed as Cascades:	--	3.8
% Pools with > 35% Embeddedness:	10	--

Large Woody Debris Size	Pieces per km
< 5 m long, 5 cm – 10 cm diameter:	47
< 5 m long, 11-50 cm diameter:	24
< 5 m long, >50 cm diameter:	13
> 5 m long, 5 cm – 10 cm diameter:	11
> 5 m long, 11-50 cm diameter:	21
> 5 m long, >50 cm diameter:	5
Rootwads:	3
Total:	125

Riparian Width	Total Width* (m)	Left & Right Width** (m)
Mean	25	5
Maximum	68	51
75 th Percentile	29	5
25 th Percentile	18	2
Minimum	10	0

*Left riparian, right riparian, and bankfull channel widths were added together for calculations

**Left and right riparian widths were grouped (not added) together for calculations

Other Stream Attributes	
Mean Bankfull Channel Width (m):	14
Mean Channel Gradient (%):	6

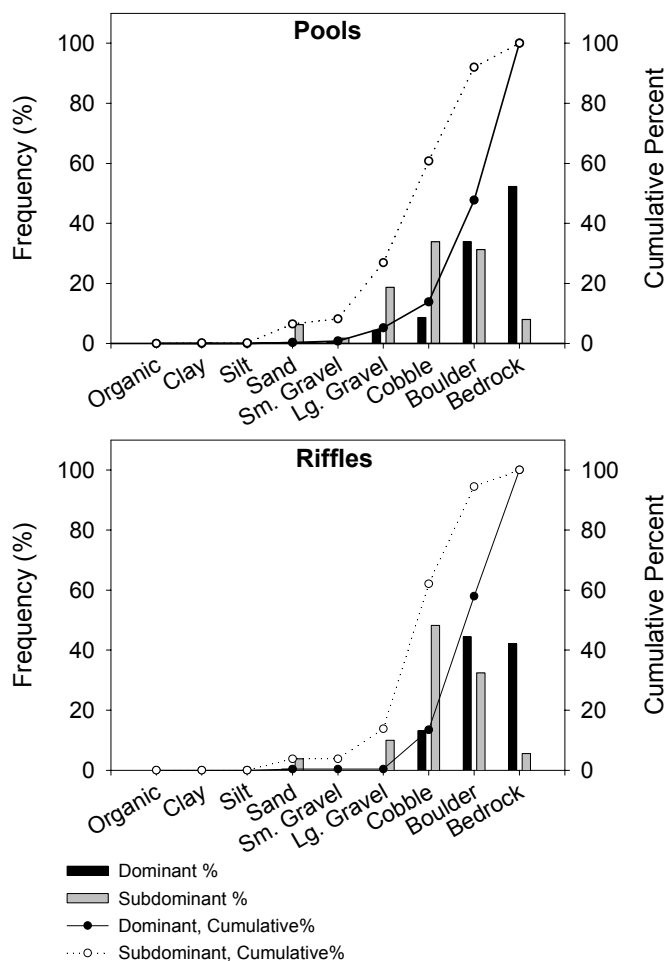


Figure A73. Frequency (percent) and cumulative percent of dominant and subdominant substrate occurrence for pools and riffles in Conasauga River, summer 2002.

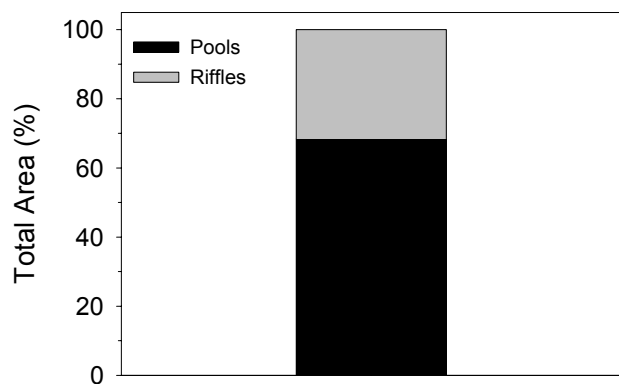


Figure A74. Estimated area of Conasauga River in pools and riffles as calculated using BVET techniques, summer 2002.

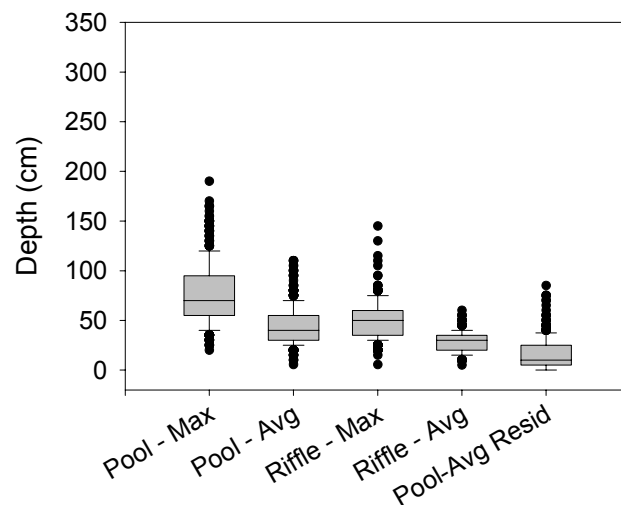


Figure A75. Maximum and average depths and residual pool depths for pools and riffles in Conasauga River, summer 2002. The top and bottom of the boxes represent the 25th and 75th percentiles, the bar in the center of the box represents the median, whiskers represent the 10th and 90th percentiles, and closed circles represent the entire range of the data.

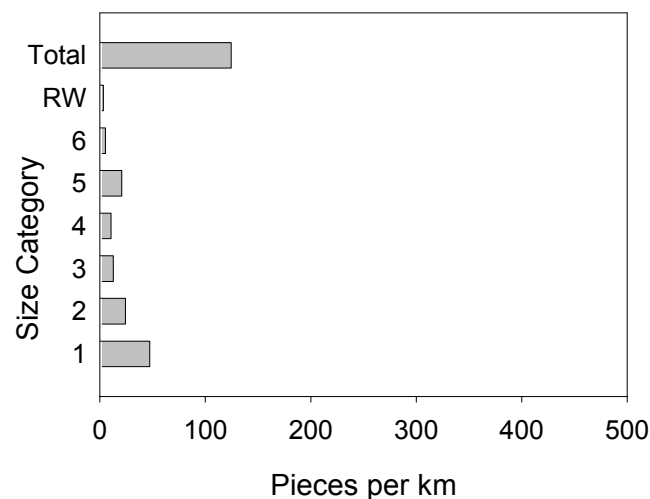


Figure A76. LWD per kilometer in Conasauga River, summer 2002.

Table A26. Stream features found on Conasauga River during BVET habitat survey, summer 2002.
Distance is meters from start of survey.

Stream Feature	Distance (m)	Width (m)	Comments
Tributary	163.0	0.5	in on right
Side Channel In	483.0	9.0	on left
Side Channel In	595.0		
Side Channel Out	603.0		
Side Channel In	605.0		
Side Channel Out	641.0		
Trail Crossing	925.0		
Side Channel In	1236.0	4.0	
Side Channel Out	1250.0	4.0	
Tributary	1367.0	2.0	in on left
Bug sample site 1	1721.0		in habitat unit R26
Tributary	1449.0		in on right, low flow
Side Channel In	1965.0		on left
Trail Crossing	2050.0		
Trail Crossing	2165.0		
Tributary	2305.0		in on right, small
Side Channel In	2503.0	3.0	
Side Channel Out	2510.0	3.0	
Trail Crossing	2651.0		
Tributary	3019.0		low flow
Side Channel In	3106.0	12.0	on right
Bug sample site 2	3638.0		in habitat unit 51
Side Channel Out	3136.0	12.0	on right
Tributary	3992.0	3.0	on left
Trail Crossing	4100.0		
Tributary	4736.0	1.0	on left
Tributary	4863.0	1.0	on left
Trail Crossing	5384.0		
Trail Crossing	5413.0		
Tributary	5517.0		on left, low flow
Trail Crossing	5572.0		
Side Channel In	5628.0	7.0	
Sample site 3	5643.0		in habitat unit R83
Side Channel Out	5643.0	7.0	
Side Channel In	5771.0	7.0	
Side Channel Out	5786.0	7.0	
Trail Crossing	5786.0		
Side Channel In	5841.0	5.0	
Side Channel Out	5856.0	5.0	
Tributary	5966.0		on left
Waterfall	5966.0		
Trail Crossing	6057.0		
Trail Crossing	6193.0		
Side Channel In	6303.0	5.0	
Side Channel Out	6323.0	5.0	
Side Channel In	6552.0	6.0	
Side Channel Out	6573.0	6.0	
Side Channel In	6764.0	5.0	

Table 26. cont.

Stream Feature	Distance (m)	Width (m)	Comments
Side Channel Out	6774.0	5.0	
Side Channel In	6955.0	7.0	
Trail Crossing	7060.0		
Side Channel Out	7060.0	7.0	
Seep	7345.0		in on left
Side Channel In	7671.0		on left
Side Channel In	7626.0		on right
Bug sample site 4	7657.0		in habitat unit R112
Side Channel Out	7726.0		on right
Side Channel In	7829.0		
Side Channel Out	7837.0		
Tributary	7895.0		in on left, Thomas Creek
Tributary	7940.0		in on left
Seep	8235.0		in on left
Trail Crossing	8272.0		
Side Channel In	8289.0		
Side Channel Out	8293.0		
Side Channel In	8429.0		very small
Tributary	8730.0	1.0	in on right
Side Channel In	8788.0		
Side Channel Out	8828.0		
Side Channel In	8916.0	4.0	
Side Channel Out	8941.0	4.0	
Side Channel In	9050.0	9.0	
Side Channel Out	9060.0	9.0	
Side Channel In	9247.0		
Trail Crossing	9516.0		
Tributary	9573.0		in on right, Hickory Creek
Trail Crossing	9573.0		
Bug sample site 5	9657.0		in habitat unit R151
Side Channel In	9665.0		small
Side Channel In	9710.0		small
Side Channel In	9720.0	4.0	
Side Channel Out	9785.0	4.0	
Side Channel In	9866.0	2.0	
Side Channel Out	9876.0	2.0	
Side Channel In	9908.0	5.0	
Side Channel Out	9933.0	5.0	
Side Channel In	9962.0	4.0	
Side Channel Out	9978.0	4.0	
Side Channel In	10125.0	3.0	
Side Channel Out	10137.0		
Tributary	10346.0		in on left, low flow
Tributary	10698.0	3.0	in on left
Tributary	10843.0		in on right, low flow
Side Channel In	10874.0	6.0	
Side Channel Out	10929.0	6.0	
Trail Crossing	11255.0		

Table A26. cont

Stream Feature	Distance (m)	Width (m)	Comments
Tributary	11309.0	2.0	Tear Britches Creek
Bug sample site 6	11564.0		in habitat unit R173
Tributary	11664.0	3.0	in on left
Tributary	11911.0	3.0	in on left
Trail Crossing	11985.0		
Trail Crossing	12257.0		
Trail Crossing	12447.0		
Trail Crossing	12602.0		
Trail Crossing	12876.0		
Trail Crossing	13323.0		
Tributary	13466.0	1.5	in on left
Side Channel In	13495.0		on right
Side Channel Out	13520.0		on right
Side Channel In	13528.0		
Side Channel Out	13540.0		
Trail Crossing	13563.0		
Side Channel In	13563.0		on right
Trail Crossing	13764.0		
Bug sample site 7	13791.0		in habitat unit R204
Tributary	13827.0	0.5	in on right
Tributary	13898.0	1.0	in on left
Trail Crossing	13966.0		
Trail Crossing	14068.0		
Tributary	14149.0		in on left, low flow
Tributary	14530.0		in on left
Side Channel In	14696.0		
Side Channel Out	14712.0		
Trail Crossing	14716.0		
Tributary	14888.0	5.0	in on left
Trail Crossing	14989.0		
Tributary	15112.0	2.0	in on right
Trail Crossing	15187.0		
Trail Crossing	15367.0		
Bug sample site 8	15604.0		in habitat unit R237
Trail Crossing	15845.0		
Tributary	15845.0	0.5	in on left
Trail Crossing	16122.0		
Trail Crossing	16321.0		
Side Channel In	16660.0		
Side Channel Out	16738.0		
Tributary	17009.0	4.0	in on right
Tributary	17221.0		Potato Patch Creek
Tributary	17417.0		in on left
Bug sample site 9	17623.0		in habitat unit R288

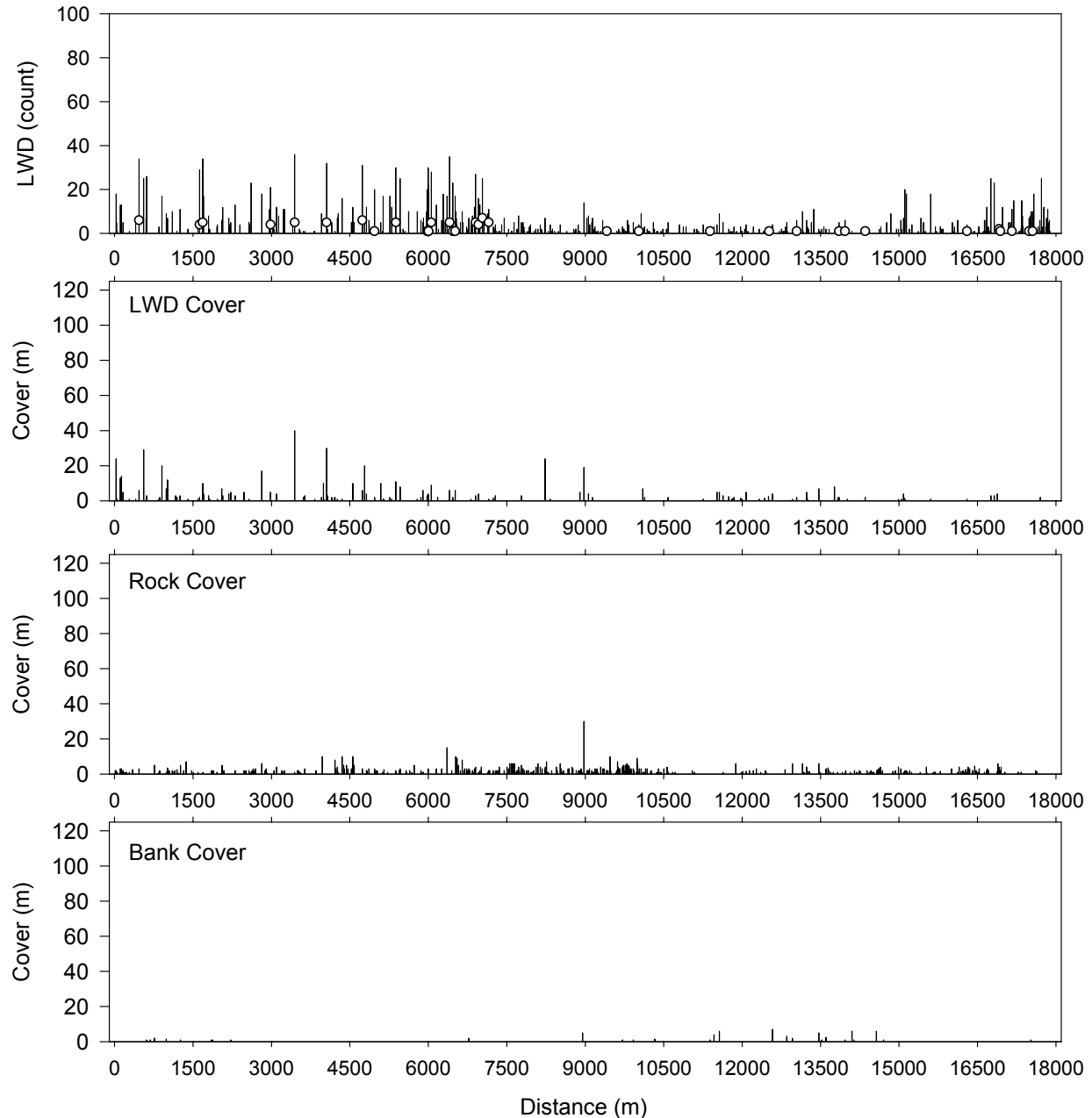


Figure A77. Distribution and abundance of LWD, and distribution of LWD, rock, and bank cover in Conasauga River, summer 2002. LWD and cover were recorded for each habitat unit in the stream.

Distance is meters upstream of Cohutta Wilderness Boundary.

LWD distribution and abundance: Vertical bars indicate total count of LWD. Open circles represent the amount of the total LWD that was >5 m in length, >50 cm in diameter (size 6).

LWD, rock, and bank cover: Cover was defined as linear meters of the cover type within the wetted channel under which a 15 cm long object could be hidden from overhead view. Vertical bars indicate amount of cover in linear meters.

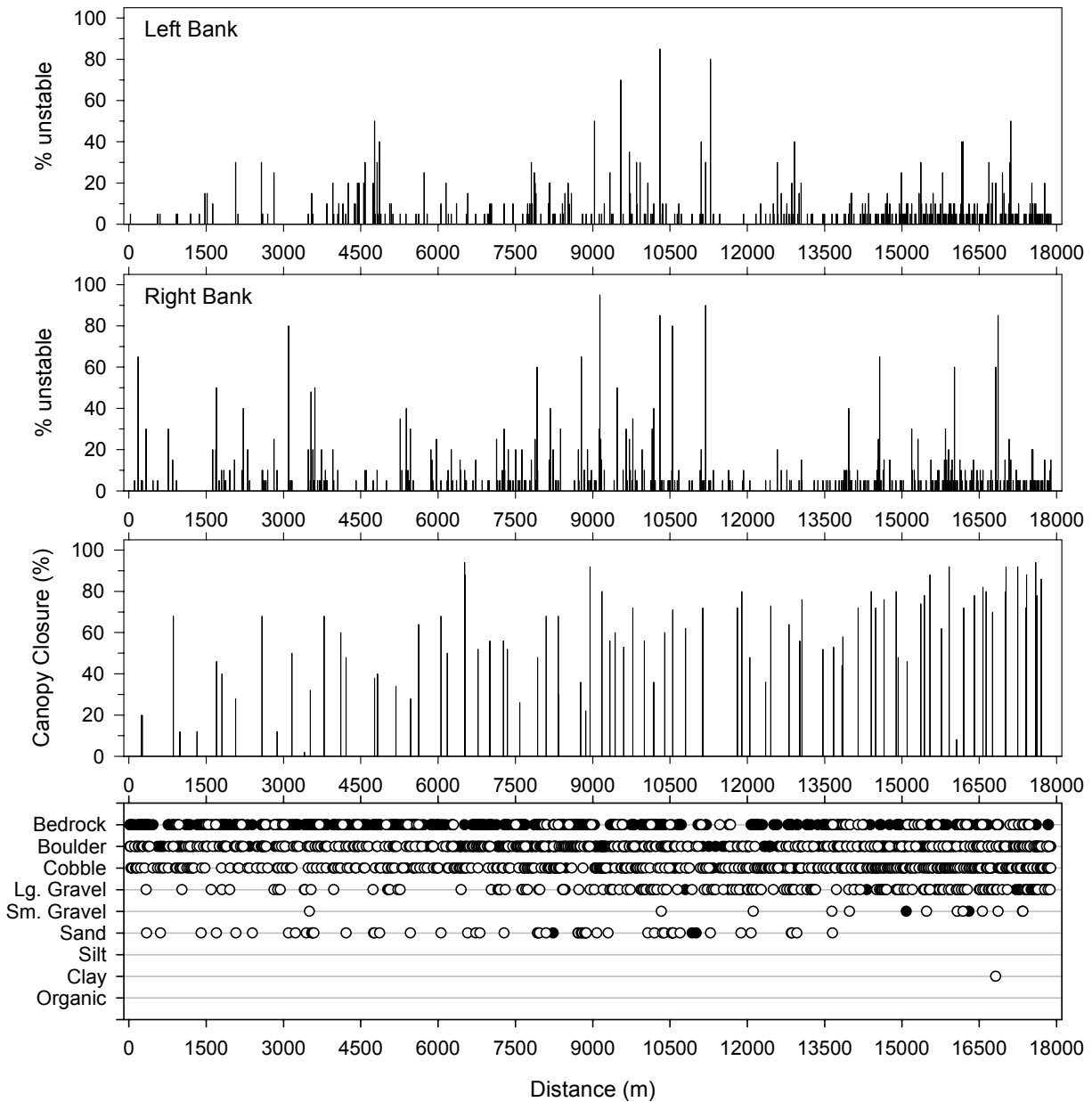


Figure A78. Bank stability, canopy closure and substrate distribution in Conasauga River, summer 2002. Bank stability and substrate were recorded for each habitat unit in the stream. Canopy closure was measured where paired samples were recorded. Distance is meters upstream of Cohutta Wilderness Boundary.

Bank stability: Left and right bank were recorded as looking upstream. Vertical bars indicate percent of bank identified as unstable.

Canopy closure: Vertical bars indicate percent of canopy closure.

Substrate distribution: Closed circles indicate dominant substrate type, open circles indicate subdominant substrate type.

Table A27. Stream habitat survey summary for Conasauga River (lower), 2002.

Stream:	Conasauga River (lower)
District:	Armuchee-Cohutta
USGS Quadrangle:	Parksville/Beaverdale
Survey Date:	07/11/02
Downstream Starting Point:	U.S. Rt. 411 bridge near Cherokee NF boundary
Total Distance Surveyed (km):	5.8

	Pools	Riffles
Percent of Total Stream Area:	93	7
Number:	24	8
Number per km:	4	1
Total Area (m ²):	99107±2302	6963± *
Mean Area (m ²):	4129	870
Correction Factor:	1.02	1.53
# of Paired Samples:	2	1
Mean Maximum Depth (cm):	121	58
Mean Average Depth (cm):	72	37
Mean Residual Pool Depth (cm):	41	--
% of Pool Habitat Surveyed as Glides:	0.0	--
% of Riffle Habitat Surveyed as Runs:	--	0.0
% of Riffle Habitat Surveyed as Cascades:	--	0.0
% Pools with > 35% Embeddedness:	79	--

* Not enough paired samples measured to calculate correction factor.

Large Woody Debris Size	Pieces per km
< 5 m long, 5 cm – 10 cm diameter:	15
< 5 m long, 11-50 cm diameter:	2
< 5 m long, >50 cm diameter:	0
> 5 m long, 5 cm – 10 cm diameter:	0
> 5 m long, 11-50 cm diameter:	20
> 5 m long, >50 cm diameter:	13
Rootwads:	6
Total:	57

Riparian Width	Total Width* (m)	Left & Right Width** (m)
Mean	152	66
Maximum	152	132
75 th Percentile	152	99
25 th Percentile	152	33
Minimum	152	0

*Left riparian, right riparian, and bankfull channel widths were added together for calculations

**Left and right riparian widths were grouped (not added) together for calculations

Other Stream Attributes	
Mean Bankfull Channel Width (m):	20
Mean Channel Gradient (%):	1

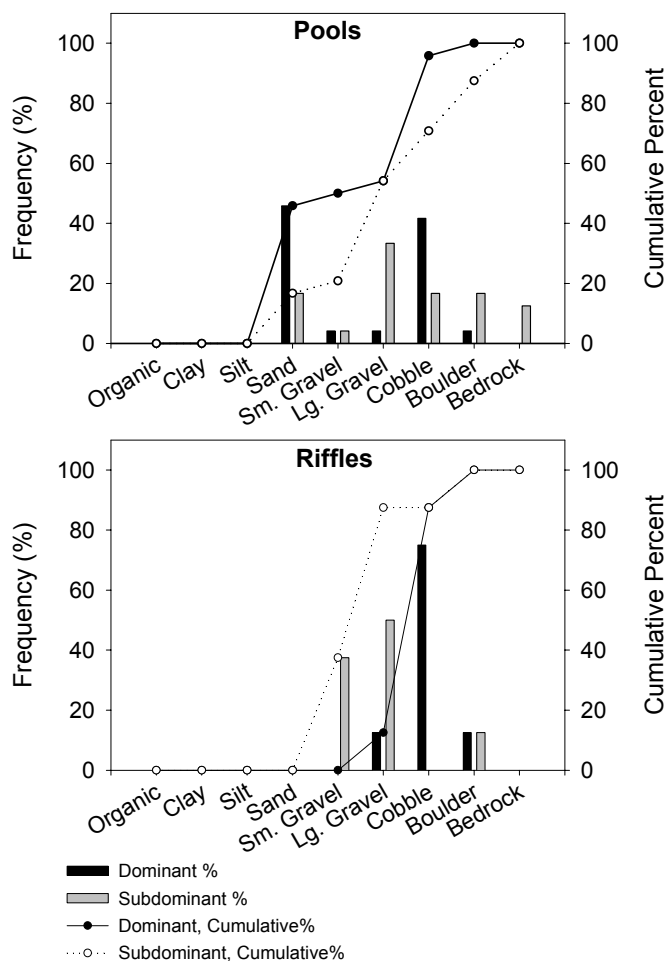


Figure A79. Frequency (percent) and cumulative percent of dominant and subdominant substrate occurrence for pools and riffles in the Conasauga River (lower), summer 2002.

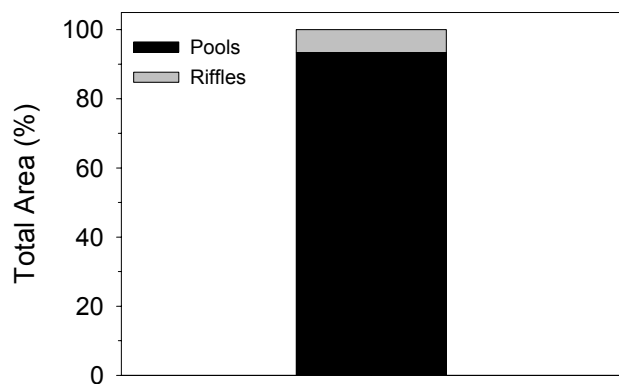


Figure A80. Estimated area of the Conasauga River (lower) in pools and riffles as calculated using BVET techniques, summer 2002.

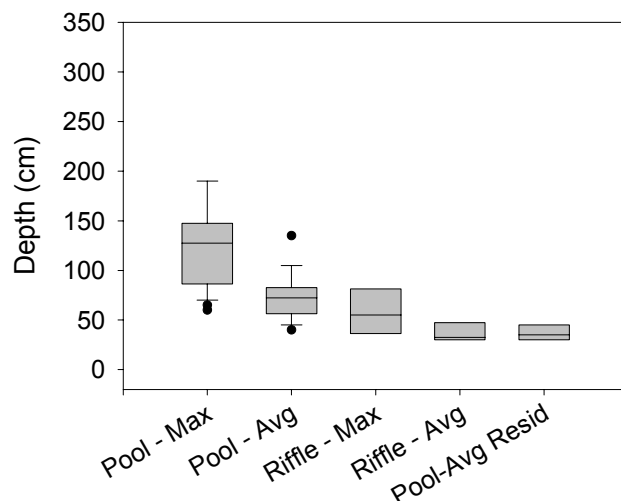


Figure A81. Maximum and average depths and residual pool depths for pools and riffles in the Conasauga River (lower), summer 2002. The top and bottom of the boxes represent the 25th and 75th percentiles, the bar in the center of the box represents the median, whiskers represent the 10th and 90th percentiles, and closed circles represent the entire range of the data.

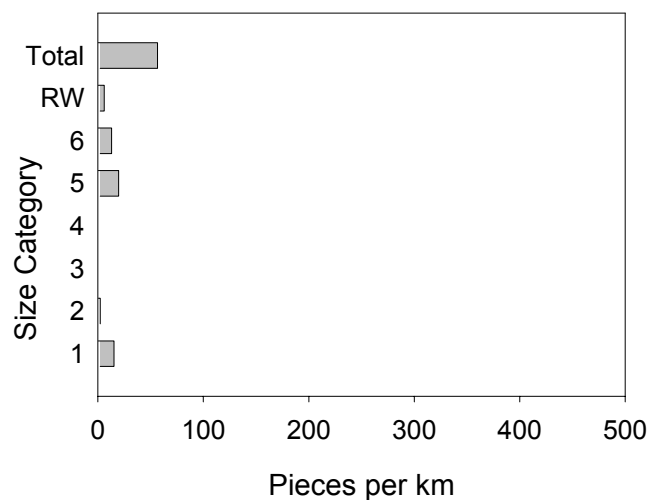


Figure A82. LWD per kilometer in the Conasauga River (lower), summer 2002.

Table A28. Stream features found on the Conasauga River (lower) during BVET habitat survey, summer 2002. Distance is meters from start of survey.

Stream Feature	Distance (m)	Width (m)	Comments
Side Channel In	1.0		
Side Channel Out	30.0		
Side Channel In	3636.0		
Side Channel Out	3676.0		
Side Channel In	3882.0		
Side Channel Out	3907.0		
Tributary	4730.0		Mill Creek
Side Channel In	5297.0		
Side Channel Out	5327.0		
Tributary	5401.0		Perry Creek

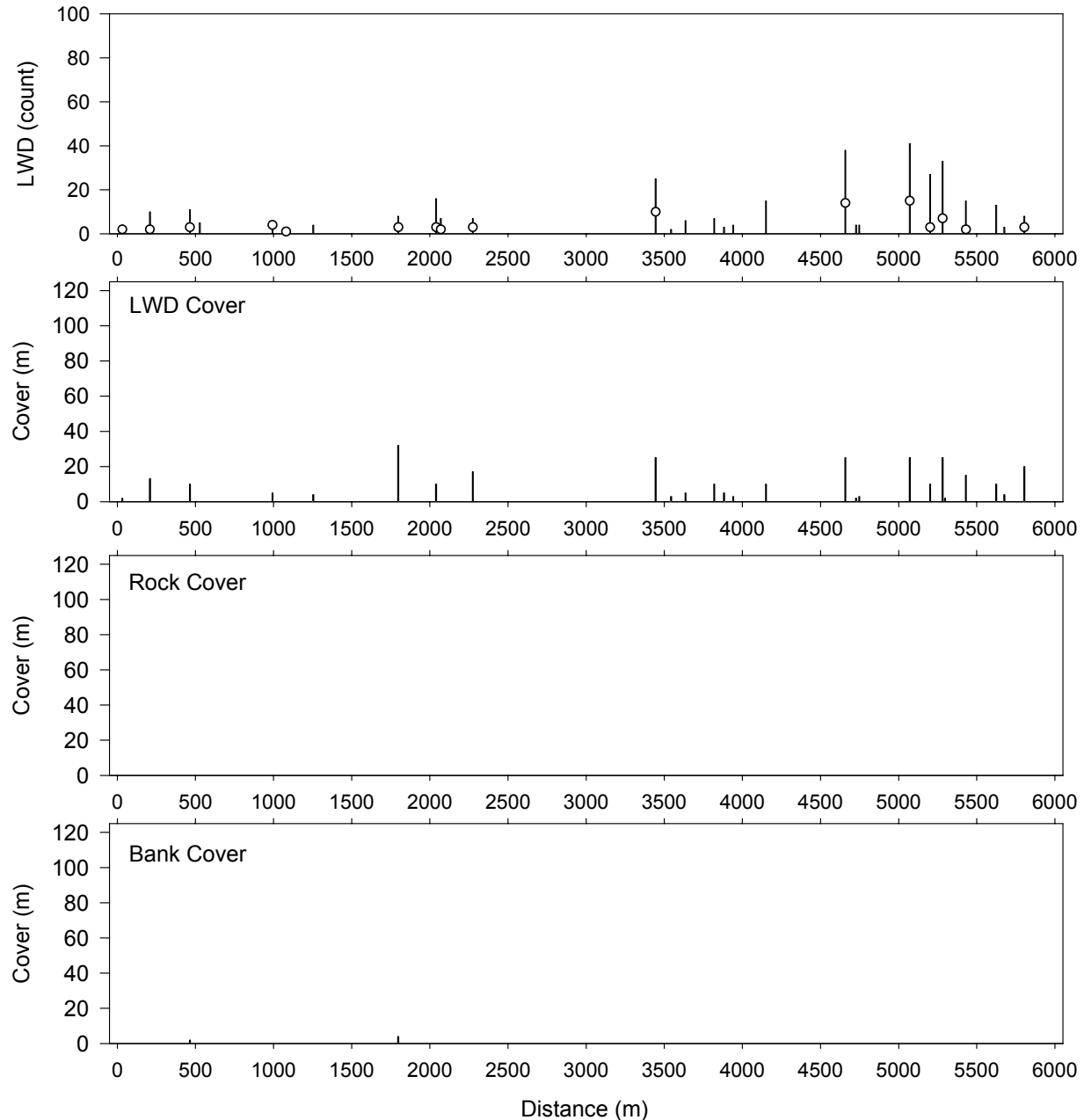


Figure A83. Distribution and abundance of LWD, and distribution of LWD, rock, and bank cover in Conasauga River (lower), summer 2002. LWD and cover were recorded for each habitat unit in the stream. Distance is meters upstream of USFS Boundary.

LWD distribution and abundance: Vertical bars indicate total count of LWD. Open circles represent the amount of the total LWD that was >5 m in length, >50 cm in diameter (size 6).

LWD, rock, and bank cover: Cover was defined as linear meters of the cover type within the wetted channel under which a 15 cm long object could be hidden from overhead view. Vertical bars indicate amount of cover in linear meters.

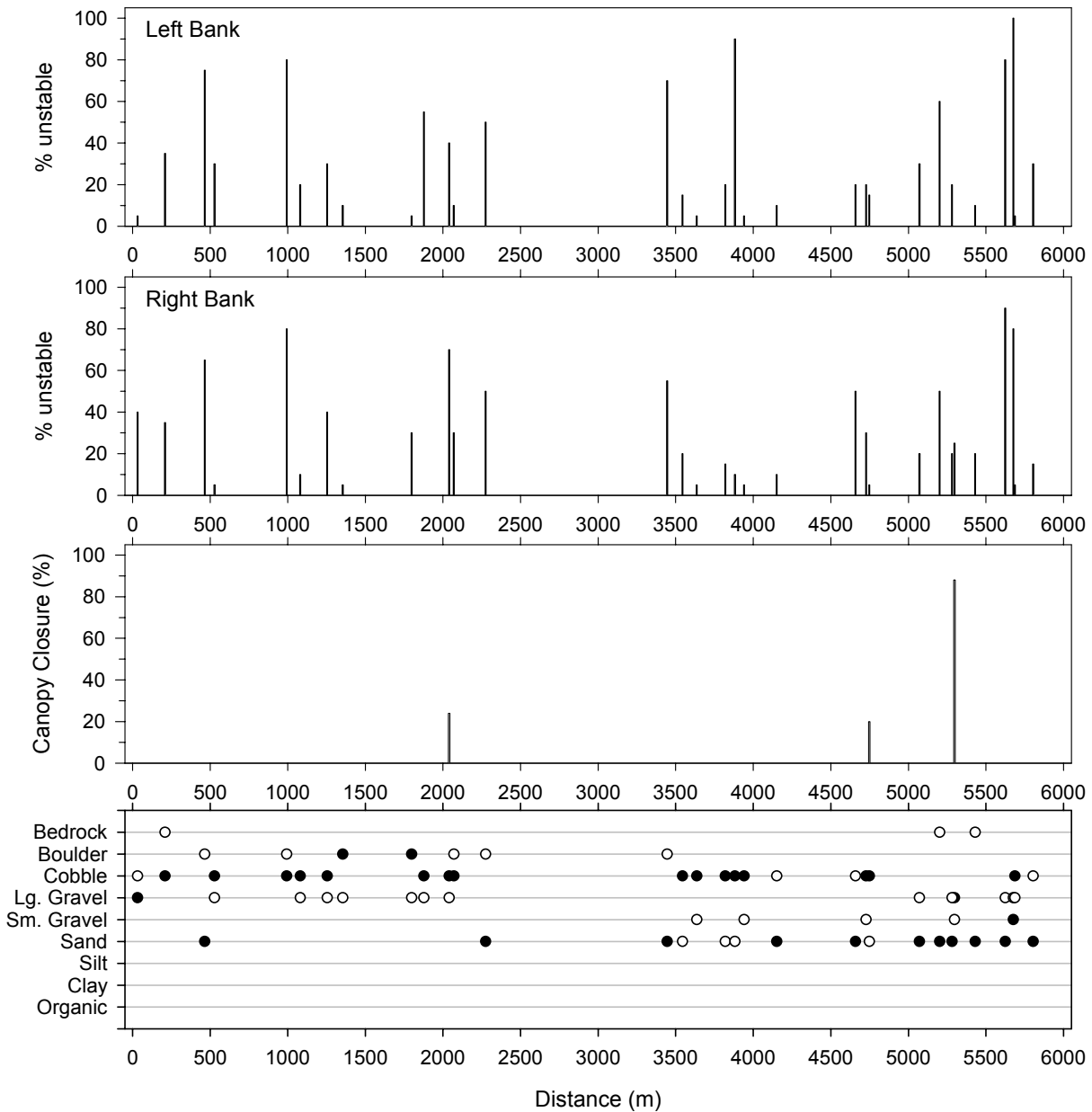


Figure A84. Bank stability, canopy closure and substrate distribution in Conasauga River (lower), summer 2002. Bank stability and substrate were recorded for each habitat unit in the stream. Canopy closure was measured where paired samples were recorded. Distance is meters upstream of USFS Boundary.

Bank stability: Left and right bank were recorded as looking upstream. Vertical bars indicate percent of bank identified as unstable.

Canopy closure: Vertical bars indicate percent of canopy closure.

Substrate distribution: Closed circles indicate dominant substrate type, open circles indicate subdominant substrate type.

Table A29. Stream habitat survey summary for Sheeds Creek, 2002.

Stream:	Sheeds Creek
District:	Ocoee, Cherokee NF
USGS Quadrangle:	Hemp Top/Caney Creek
Survey Date:	06/12/02
Downstream Starting Point:	Confluence with Jacks River
Total Distance Surveyed (km):	9.4

	Pools	Riffles
Percent of Total Stream Area:	36	64
Number:	282	244
Number per km:	30	26
Total Area (m ²):	15036±1469	26885±1285
Mean Area (m ²):	53	110
Correction Factor:	1.06	0.98
# of Paired Samples:	29	25
Mean Maximum Depth (cm):	44	23
Mean Average Depth (cm):	28	11
Mean Residual Pool Depth (cm):	12	--
% of Pool Habitat Surveyed as Glides:	12	--
% of Riffle Habitat Surveyed as Runs:	--	0
% of Riffle Habitat Surveyed as Cascades:	--	2.9
% Pools with > 35% Embeddedness:	61	--

Large Woody Debris Size	Pieces per km
< 5 m long, 5 cm – 10 cm diameter:	27
< 5 m long, 11-50 cm diameter:	44
< 5 m long, >50 cm diameter:	3
> 5 m long, 5 cm – 10 cm diameter:	11
> 5 m long, 11-50 cm diameter:	55
> 5 m long, >50 cm diameter:	4
Rootwads:	6
Total:	150

Riparian Width	Total Width* (m)	Left & Right Width** (m)
Mean	14	3
Maximum	37	17
75 th Percentile	17	5
25 th Percentile	8	1
Minimum	6	0

*Left riparian, right riparian, and bankfull channel widths were added together for calculations

**Left and right riparian widths were grouped (not added) together for calculations

Other Stream Attributes	
Mean Bankfull Channel Width (m):	8
Mean Channel Gradient (%):	3

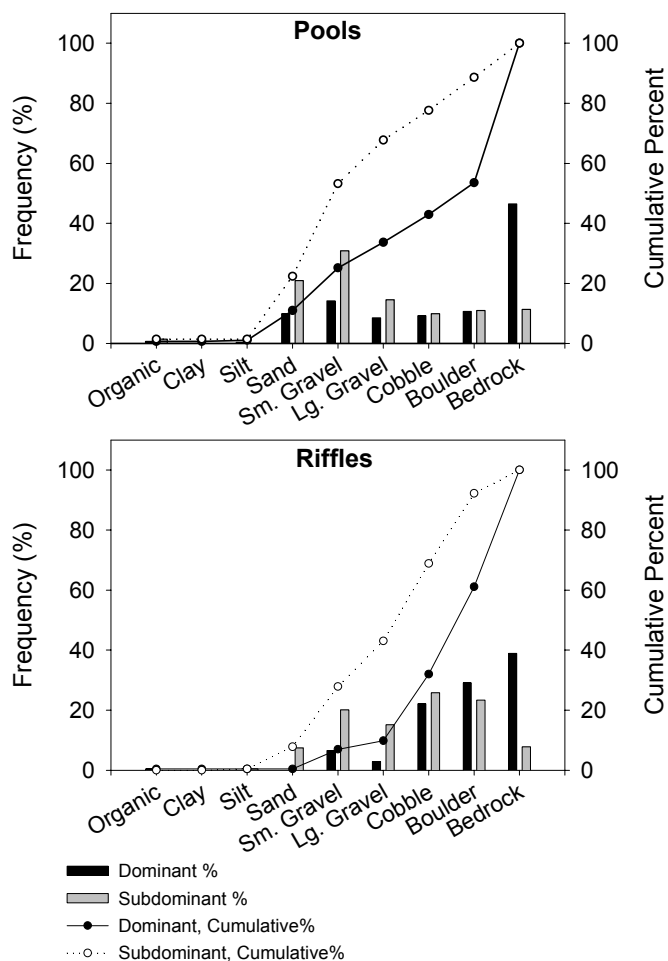


Figure A85. Frequency (percent) and cumulative percent of dominant and subdominant substrate occurrence for pools and riffles in Sheeds Creek, summer 2002.

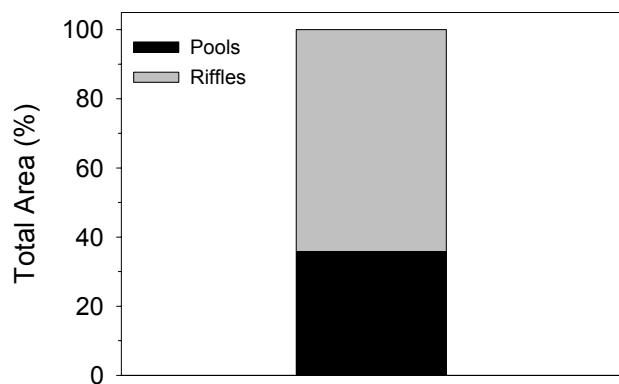


Figure A86. Estimated area of Sheeds Creek in pools and riffles as calculated using BVET techniques, summer 2002.

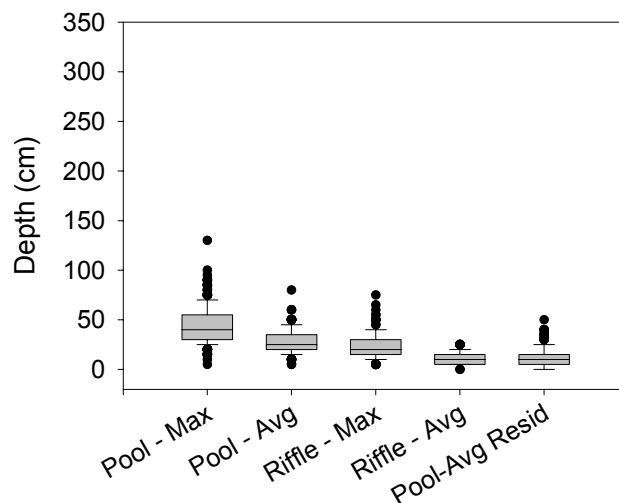


Figure A87. Maximum and average depths and residual pool depths for pools and riffles in Sheeds Creek, summer 2002. The top and bottom of the boxes represent the 25th and 75th percentiles, the bar in the center of the box represents the median, whiskers represent the 10th and 90th percentiles, and closed circles represent the entire range of the data.

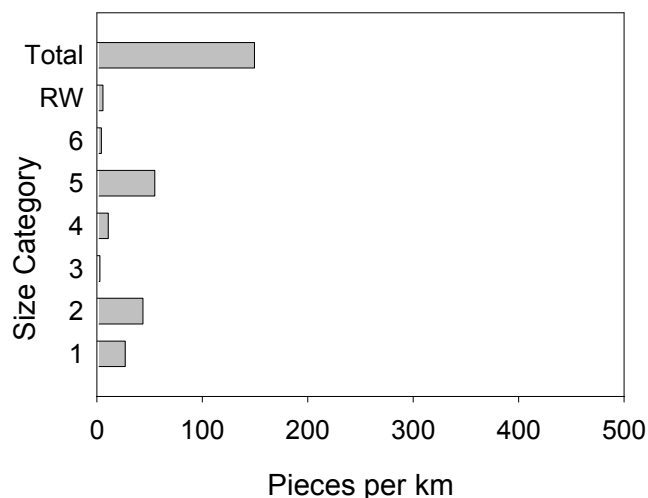


Figure A88. LWD per kilometer in Sheeds Creek, summer 2002.

Table A30. Stream features found on Sheeds Creek during BVET habitat survey, summer 2002. Distance is meters from start of survey.

Stream Feature	Distance (m)	Width (m)	Comments
Bridge	21.8	10.0	4 m long
Tributary	141.8	0.5	on left
Bug sample site 1	211.0		
Side Channel Out	219.3	3.0	on right
Tributary	229.1	0.5	on right
Side Channel In	321.4	1.5	on left
Side Channel Out	326.2	1.5	on left
Other	326.2		log jam
Side Channel In	337.4	1.0	on left
Side Channel Out	363.3	1.0	on left
Side Channel In	373.5	1.0	on left
Tributary	513.5	2.0	on right
Side Channel In	560.1	3.0	on right
Other	636.2		log jam
Side Channel Out	600.1	3.0	on right
Bridge	692.5	12.0	3 m long
Tributary	746.8	0.8	on left, trail to right of stream
Waterfall	1095.1		1.5 m tall
Bug sample site 2	1211.0		
Other	1561.9		log jam and boulders
Bug sample site 3	2211.0		
Waterfall	2550.2		1.25 m tall
Tributary	2576.0	1.0	on right
Tributary	3027.4	0.3	on left
Tributary	3076.1	0.3	on left
Bug sample site 4	3211.0		
Tributary	3480.2	0.5	on left
Bug sample site 5	4211.0		
Bug sample site 6	5211.0		
Tributary	5339.1	2.5	on right
Tributary	5438.2	1.5	on left
Tributary	5457.1	1.5	on right
Other	5557.8		log jam
Tributary	5830.0	0.5	on left
Tributary	5913.2	1.0	on right
Tributary	6097.1	1.0	on left
Bug sample site 7	6211.0		
Tributary	6408.5	1.0	on left
Side Channel In	6500.1	1.0	on right
Side Channel Out	6543.3	1.0	on right
Other	6581.8		log jam
Tributary	6787.2	0.3	on right
Side Channel In	6953.2	2.0	on right
Side Channel In	6968.0	2.5	on right
Side Channel Out	6996.6	3.0	on right
Other	7032.5		log jam
Bridge	7066.3	10.7	2 m above stream, 4.5 m long
Bug sample site 8	7211.0		

Table A30. cont.

Stream Feature	Distance (m)	Width (m)	Comments
Other	7219.4		log jam
Tributary	7575.2	1.5	on left
Other	7583.6		log jam
Tributary	7750.0	2.5	on left
Other	7889.0		log jam
Other	7922.7		log jam
Other	7970.2		log jam
Other	8114.0		log jam
Tributary	8264.2	0.3	on left
Other	8435.8		log jam
Other	8583.6		log jam
Tributary	8668.6	0.3	on right
Tributary	8680.5	0.3	on right, orange seep discharge on left
Other	8770.9		log jam
Tributary	8971.8	0.8	on left
Other	9101.6		log jam
Tributary	9113.4	1.0	on left, enters stream braided
Side Channel In	9163.6	0.5	on right
Side Channel Out	9189.9	0.5	on right
Tributary	9235.9	1.0	on right, steep trickling
Tributary	9288.4	2.5	on left
Underground	9317.3		from 9313.9 m to 9317.3 m

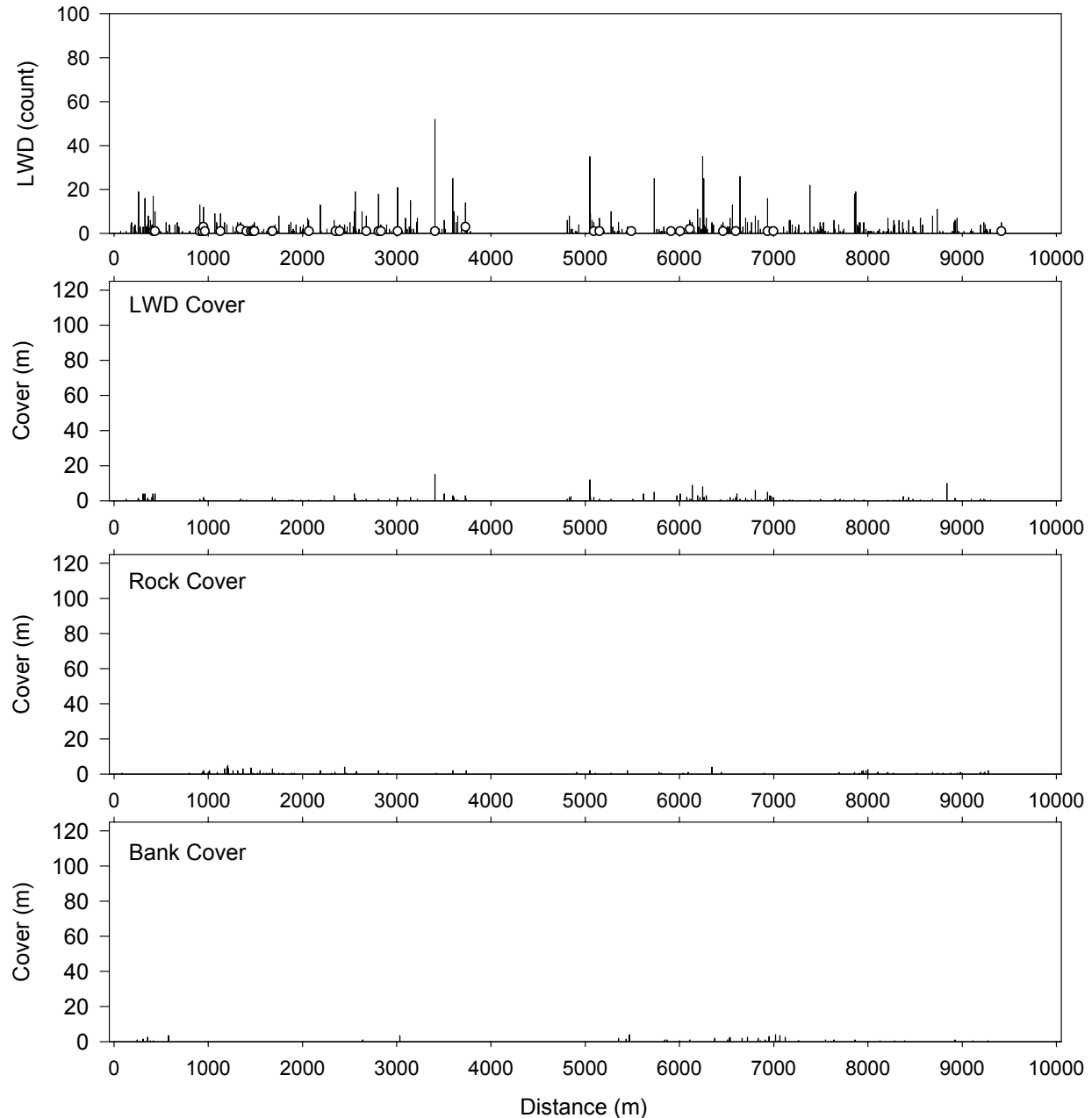


Figure A89. Distribution and abundance of LWD, and distribution of LWD, rock, and bank cover in Sheeds Creek, summer 2002. LWD and cover were recorded for each habitat unit in the stream. Distance is meters upstream of confluence with Jacks River.

LWD distribution and abundance: Vertical bars indicate total count of LWD. Open circles represent the amount of the total LWD that was >5 m in length, >50 cm in diameter (size 6).

LWD, rock, and bank cover: Cover was defined as linear meters of the cover type within the wetted channel under which a 15 cm long object could be hidden from overhead view. Vertical bars indicate amount of cover in linear meters.

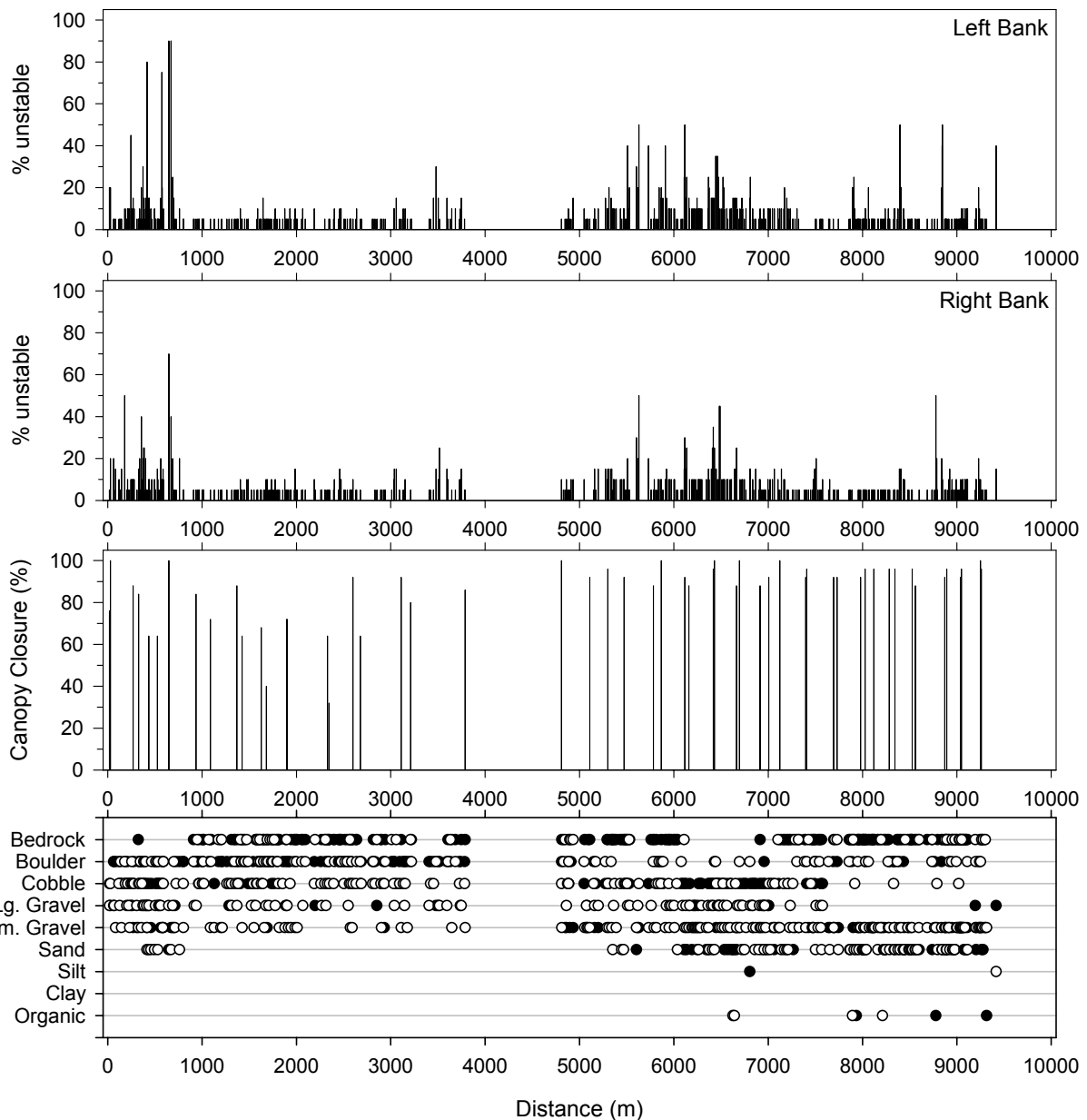


Figure A90. Bank stability, canopy closure and substrate distribution in Sheeds Creek, summer 2002. Bank stability and substrate were recorded for each habitat unit in the stream. Canopy closure was measured where paired samples were recorded. Distance is meters upstream of confluence with Jacks River.

Bank stability: Left and right bank were recorded as looking upstream. Vertical bars indicate percent of bank identified as unstable.

Canopy closure: Vertical bars indicate percent of canopy closure.

Substrate distribution: Closed circles indicate dominant substrate type, open circles indicate subdominant substrate type.

Table A31. Stream habitat survey summary for Sheeds Creek Middle Fork, 2002.

Stream:	Sheeds Creek Middle Fork
District:	Ocoee, Cherokee NF
USGS Quadrangle:	Caney Creek
Survey Date:	06/30/02
Downstream Starting Point:	Confluence with Sheeds Creek
Total Distance Surveyed (km):	1.6

	Pools	Riffles
Percent of Total Stream Area:	35	65
Number:	69	54
Number per km:	43	34
Total Area (m ²):	1296±255	2391±212
Mean Area (m ²):	19	44
Correction Factor:	1.11	0.91
# of Paired Samples:	8	6
Mean Maximum Depth (cm):	33	15
Mean Average Depth (cm):	21	7
Mean Residual Pool Depth (cm):	10	--
% of Pool Habitat Surveyed as Glides:	11.6	--
% of Riffle Habitat Surveyed as Runs:	--	0.0
% of Riffle Habitat Surveyed as Cascades:	--	0.0
% Pools with > 35% Embeddedness:	90	--

Large Woody Debris Size	Pieces per km
< 5 m long, 5 cm – 10 cm diameter:	38
< 5 m long, 11-50 cm diameter:	79
< 5 m long, >50 cm diameter:	2
> 5 m long, 5 cm – 10 cm diameter:	6
> 5 m long, 11-50 cm diameter:	22
> 5 m long, >50 cm diameter:	2
Rootwads:	3
Total:	152

Riparian Width	Total Width* (m)	Left & Right Width** (m)
Mean	8	2
Maximum	16	9
75 th Percentile	12	1
25 th Percentile	5	1
Minimum	5	0

*Left riparian, right riparian, and bankfull channel widths were added together for calculations

**Left and right riparian widths were grouped (not added) together for calculations

Other Stream Attributes	
Mean Bankfull Channel Width (m):	4
Mean Channel Gradient (%):	5

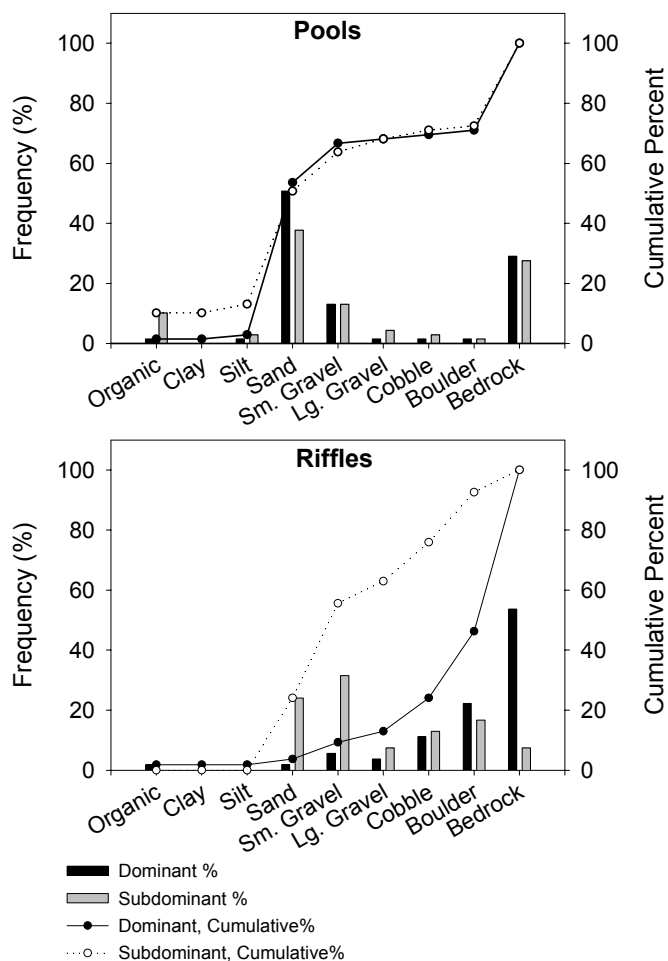


Figure A91. Frequency (percent) and cumulative percent of dominant and subdominant substrate occurrence for pools and riffles in Sheeds Creek Middle Fork, summer 2002.

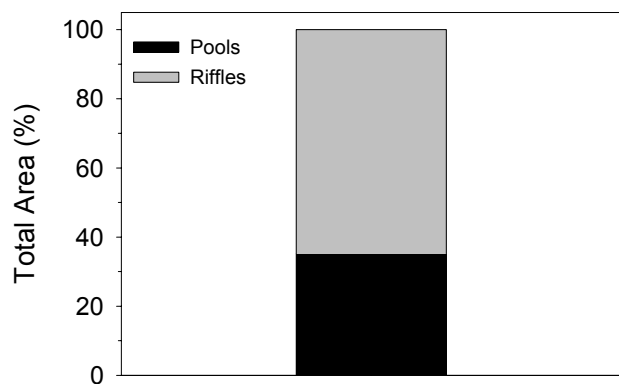


Figure A92. Estimated area of Sheeds Creek Middle Fork in pools and riffles as calculated using BVET techniques, summer 2002.

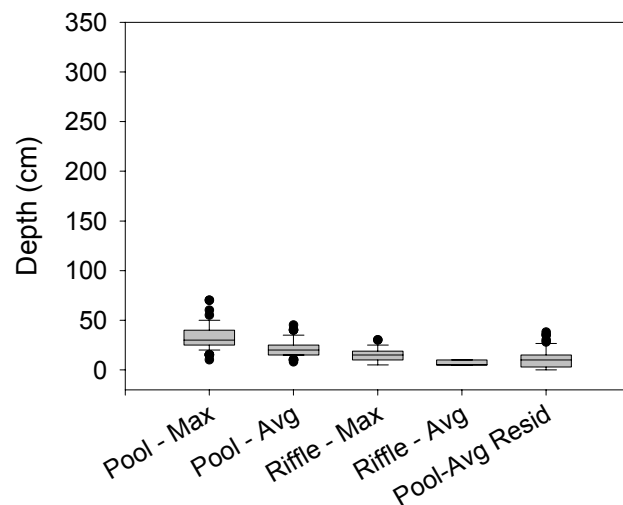


Figure A93. Maximum and average depths and residual pool depths for pools and riffles in Sheeds Creek Middle Fork, summer 2002. The top and bottom of the boxes represent the 25th and 75th percentiles, the bar in the center of the box represents the median, whiskers represent the 10th and 90th percentiles, and closed circles represent the entire range of the data.

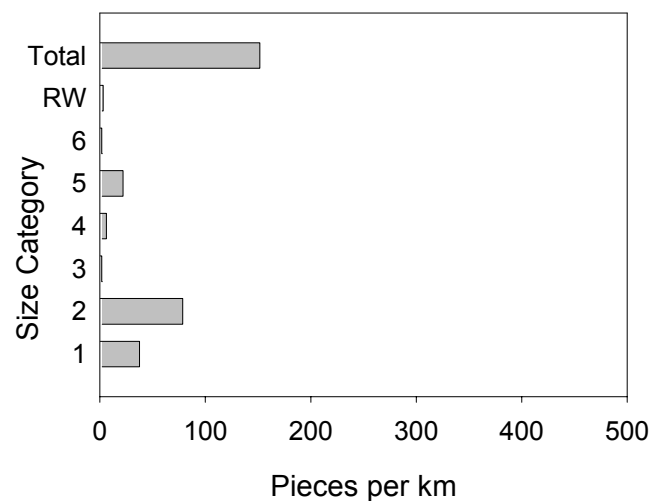


Figure A94. LWD per kilometer in Sheeds Creek Middle Fork, summer 2002.

Table A32. Stream features found on Sheeds Creek Middle Fork during BVET habitat survey, summer 2002. Distance is meters from start of survey.

Stream Feature	Distance (m)	Width (m)	Comments
Seep	47.2		in on left
Side Channel In	52.4	0.5	on right
Side Channel In	104.1	2.0	on left
Side Channel Out	119.6	0.5	on left
Side Channel Out	129.6	1.0	on right
Bug sample site 1	211.0		
Tributary	575.1	1.0	in on left
Tributary	588.0	0.5	in on left, probably branch from previous trib
Other	721.0		log jam
Seep	907.8		in on right
Tributary	1052.9	0.5	in on right
Tributary	1108.4	1.0	in on right
Bug sample site 2	1211.0		
Seep	1252.5		in on left
Tributary	1354.8	1.0	in on left
Tributary	1480.3	1.3	in on left
Tributary	1583.7	0.5	in on left
Seep	1541.7		in on right

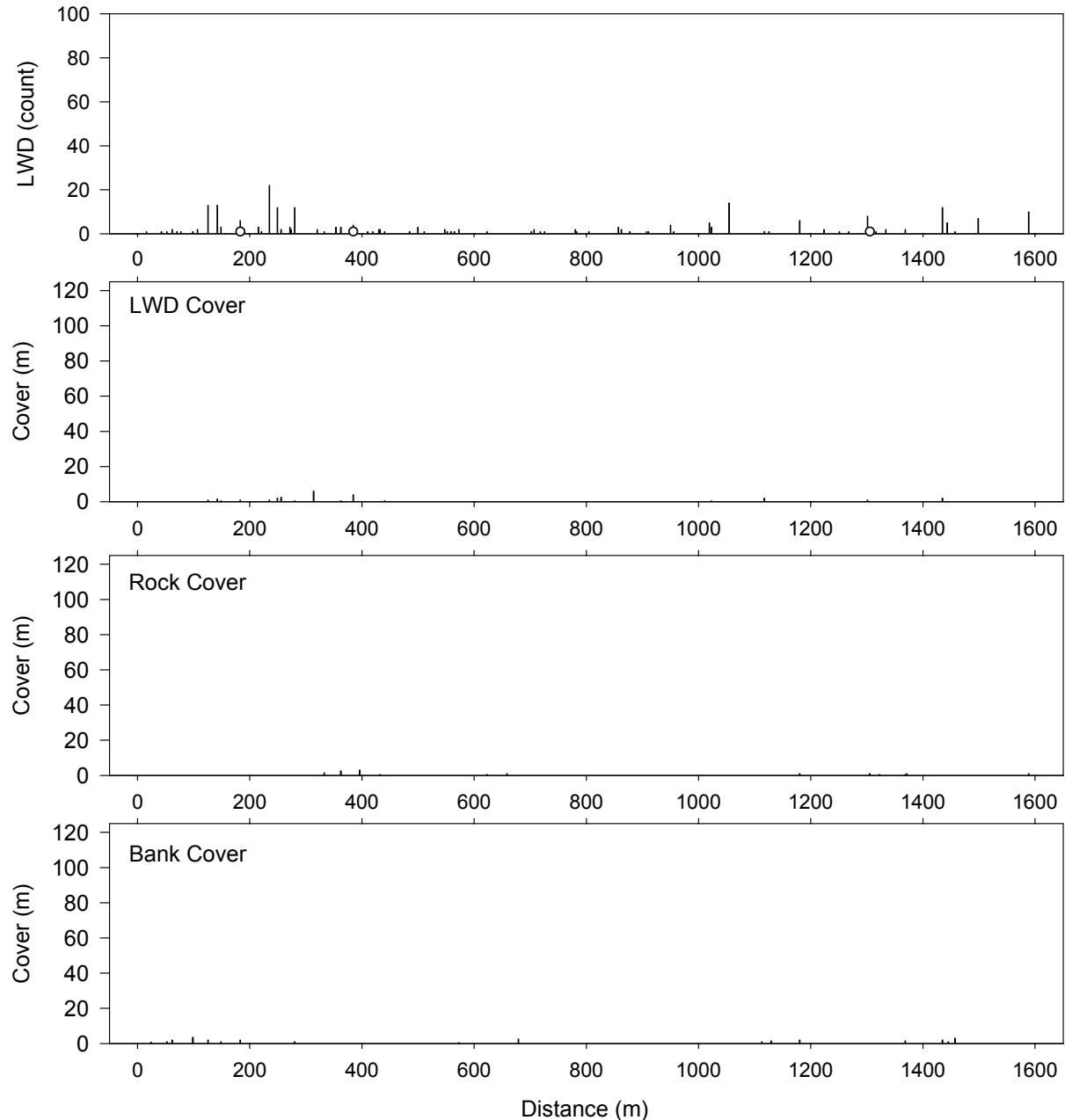


Figure A95. Distribution and abundance of LWD, and distribution of LWD, rock, and bank cover in Sheeds Creek Middle Fork, summer 2002. LWD and cover were recorded for each habitat unit in the stream. Distance is meters upstream of confluence with Sheeds Creek.

LWD distribution and abundance: Vertical bars indicate total count of LWD. Open circles represent the amount of the total LWD that was >5 m in length, >50 cm in diameter (size 6).

LWD, rock, and bank cover: Cover was defined as linear meters of the cover type within the wetted channel under which a 15 cm long object could be hidden from overhead view. Vertical bars indicate amount of cover in linear meters.

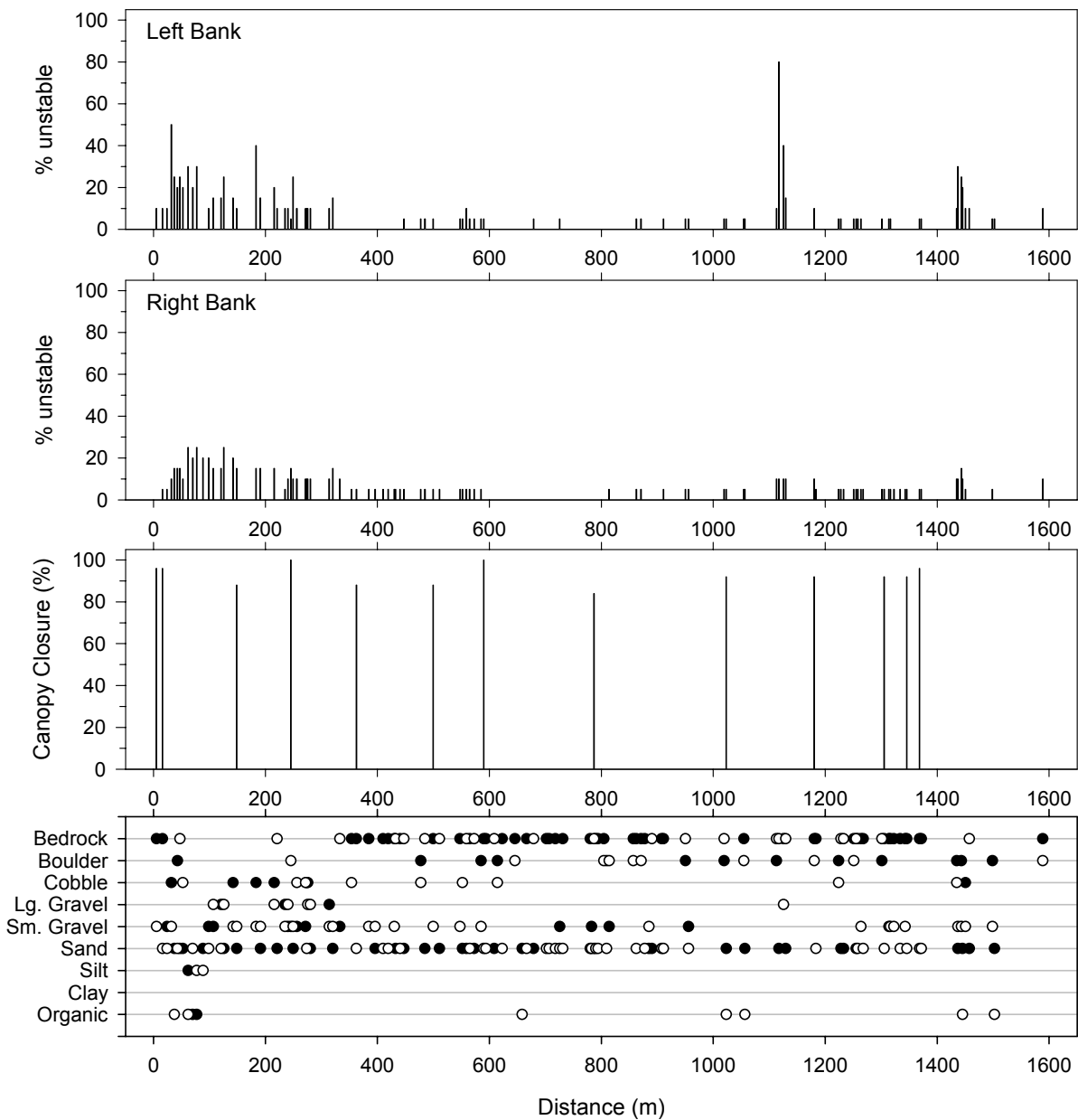


Figure A96. Bank stability, canopy closure and substrate distribution in Sheeds Creek Middle Fork, summer 2002. Bank stability and substrate were recorded for each habitat unit in the stream. Canopy closure was measured where paired samples were recorded. Distance is meters upstream of confluence with Sheeds Creek.

Bank stability: Left and right bank were recorded as looking upstream. Vertical bars indicate percent of bank identified as unstable.

Canopy closure: Vertical bars indicate percent of canopy closure.

Substrate distribution: Closed circles indicate dominant substrate type, open circles indicate subdominant substrate type.

Table A33. Stream habitat survey summary for Chattahoochee River, 2002.

Stream:	Chattahoochee River
District:	Chattooga
USGS Quadrangle:	Cow Rock/Jacks Gap
Survey Date:	5/21/2002
Downstream Starting Point:	Forest Service boundary
Total Distance Surveyed (km):	13.7

	Pools	Riffles
Percent of Total Stream Area:	57	43
Number:	631	366
Number per km:	46	27
Total Area (m ²):	58470 ± 2945	44660 ± 4240
Mean Area (m ²):	93	122
Correction Factor:	1.08	1.00
# of Paired Samples:	60	37
Mean Maximum Depth (cm):	58	36
Mean Average Depth (cm):	36	19
Mean Residual Pool Depth (cm):	11	--
% of Pool Habitat Surveyed as Glides:	0.0	--
% of Riffle Habitat Surveyed as Runs:	--	0.0
% of Riffle Habitat Surveyed as Cascades:	--	1.1
% Pools with > 35% Embeddedness:	43	--

Large Woody Debris Size	Pieces per km
< 5 m long, 5 cm – 10 cm diameter:	40
< 5 m long, 11-50 cm diameter:	62
< 5 m long, >50 cm diameter:	1
> 5 m long, 5 cm – 10 cm diameter:	7
> 5 m long, 11-50 cm diameter:	52
> 5 m long, >50 cm diameter:	3
Rootwads:	4
Total:	169

Riparian Width	Total Width* (m)	Left & Right Width** (m)
Mean	15	2
Maximum	133	20
75 th Percentile	17	3
25 th Percentile	6	1
Minimum	3	0

*Left riparian, right riparian, and bankfull channel widths were added together for calculations

**Left and right riparian widths were grouped (not added) together for calculations

Other Stream Attributes	
Mean Bankfull Channel Width (m):	11
Mean Channel Gradient (%):	5

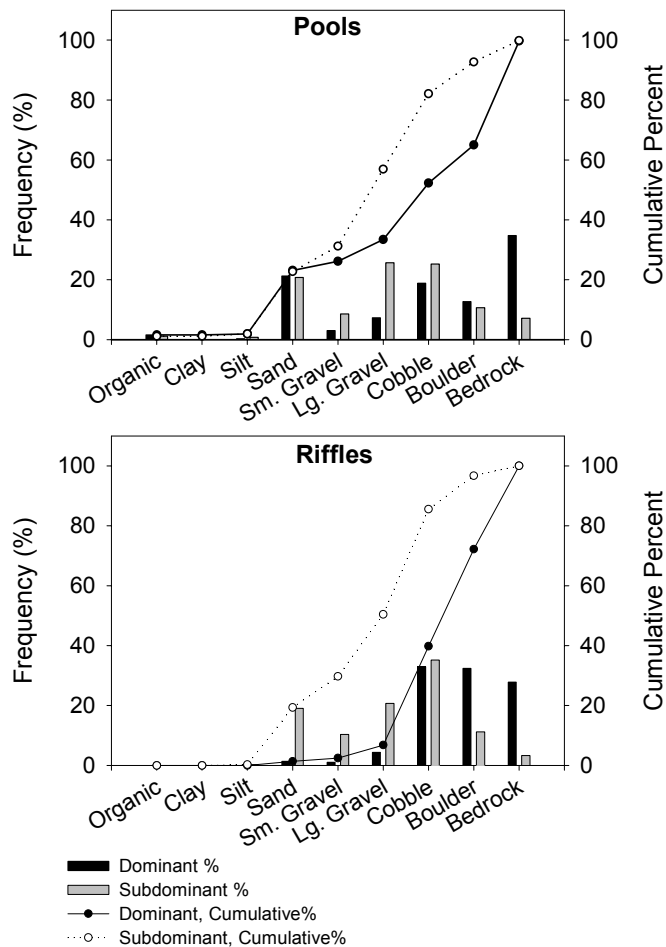


Figure A97. Frequency (percent) and cumulative percent of dominant and subdominant substrate occurrence for pools and riffles in Chattahoochee River, summer 2002.

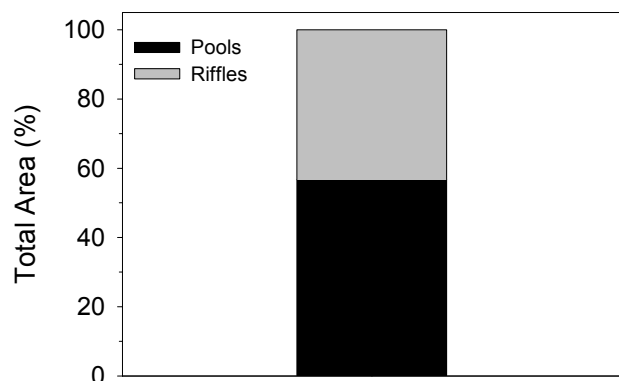


Figure A98. Estimated area of Chattahoochee River in pools and riffles as calculated using BVET techniques, summer 2002.

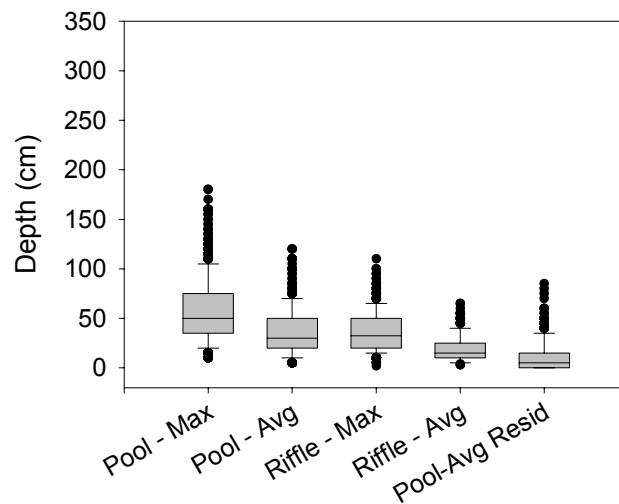


Figure A99. Maximum and average depths and residual pool depths for pools and riffles in Chattahoochee River, summer 2002. The top and bottom of the boxes represent the 25th and 75th percentiles, the bar in the center of the box represents the median, whiskers represent the 10th and 90th percentiles, and closed circles represent the entire range of the data.

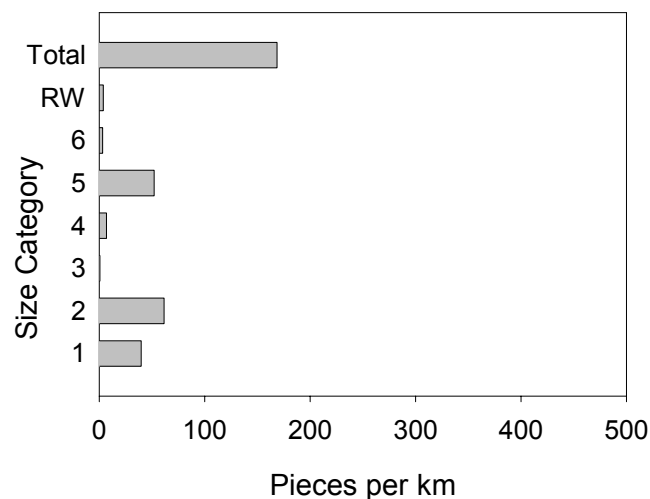


Figure A100. LWD per kilometer in Chattahoochee River, summer 2002.

Table A34. Stream features found on Chattahoochee River during BVET habitat survey, summer 2002. Distance is meters from start of survey.

Stream Feature	Distance (m)	Width (m)	Comments
Tributary	84	2.5	in on right, campsite
Bridge	133	5.0	USFS Rd 178
Trail crossing	135		
Tributary	517	1.0	in on right
Bug sample site 1	524		in habitat survey unit R7
Side Channel out	619	4.0	out on left
Side Channel in	1015	2.0	in on right
Side Channel in	1077	5.0	in on right
Side Channel in	1091	5.0	in on right
Side Channel out	1106		out on right
Tributary	1159	2.0	in on left, steep gradient
Tributary	1192	0.5	in on left, shallow grade, meanders
Bug sample site 2	1531		in habitat survey unit R21
Tributary	1683	0.5	in on left, very small
Side Channel in	1795	1.5	in on right
Side Channel out	1801	1.5	out on right
Tributary	2021	1.5	in on left
Tributary	2096	0.2	in on left, small
Tributary	2206	1.0	in on left
Bug sample site 3	2516		in habitat survey unit R33
Tributary	2683	2.0	in on right
Tributary	2757	0.5	in on right
Tributary	2953	7.0	on right, cascade
Tributary	3366	6.0	Low Gap Creek
Bug sample site 4	3562		in habitat survey unit R53
Tributary	3616	0.5	in on right
Side Channel in	3809	3.0	on right
Side Channel out	3824	3.0	on right
Tributary	3875	5.0	Jasus Creek
Tributary	4007	1.0	in on left
Tributary	4159	0.5	in on right
Tributary	4354	2.0	dry channel on right
Bug sample site 5	4539		
Tributary	4657	3.0	in on right Turkeypen creek
Tributary	4794	1.0	in on left
Tributary	5298	1.0	in on right
Bug sample site 6	5543		
Tributary	5588	0.5	in on left
Tributary	5724	0.5	in on left
Tributary	6085	0.5	in on left, cascade-like
Tributary	6113	1.0	in on left
Bug sample site 7	6531		in habitat survey unit R117
Tributary	6576	1.0	in on left cascade-like
Tributary	6658	1.0	in on right, steep and well-hidden
Tributary	7066	1.0	in on left, cascade
Tributary	7175	11.0	Vandiver Creek, cascade like on left
Tributary	7430	4.0	in on left, cascade

Table A34 cont.

Bug sample site 8	7547		in habitat survey unit R143
Tributary	7768	3.0	in on right, cascade
Tributary	7912	3.0	in on right, small fork at bottom- Wilks Creek
Side Channel in	8387	3.0	Right
Side Channel out	8415	3.0	Right
Bug sample site 9	8590		in habitat survey unit R167
Tributary	8608	0.5	in on left
Tributary	8745	0.5	dry channel
Bridge	8747	13.1	structure in stream
Side Channel in	8790	0.5	Right
Tributary	8956	2.0	in on right
Tributary	9058	2.0	in on left
Tributary	9223	0.5	in on right
Bug sample site 10	9550		
Tributary	9748	3.0	on left, horse trough falls creek
Bridge	9782	7.0	trail to falls
Side Channel in	10000	1.0	Right
Tributary	10004	0.5	trickle on left
Side Channel in	10007	1.0	Right
Side Channel out	10013	1.0	Right
Side Channel in	10014	1.0	Left
Side Channel out	10017	1.0	Left
Fall	10085	1.0	height: 10m
Tributary	10193	1.0	in on right
Tributary	10237	1.0	in on left small, looks like it's dammed
Side Channel in	10398	1.5	Left
Side Channel out	10451		Left, stream appears to fork underground/debris pile
Bug sample site 11	10540		in habitat survey unit R229
Tributary	10716	4.0	
Tributary	10783	0.5	in on right, trickle
Tributary	10865	0.5	in on right
Tributary	11045	2.0	in on right, trickle
Tributary	11056	5.0	in on right, trib forks as it enters stream
Tributary	11379	1.5	in on left
Tributary	11409	3.0	in on left- unnamed but on map
Bug sample site 12	11558		in habitat survey unit R269
Tributary	11816	1.5	in on right
Tributary	11823	3.0	in on right - unnamed on map
Tributary	12135	1.0	in on right
Tributary	12181	0.5	in on left
Tributary	12211	0.5	in on right
Tributary	12271	2.0	in on left- last fork of Hooch
Tributary	12275	0.5	in on left
Tributary	12302	0.25	on right
Tributary	12364	0.5	on left
Side Channel in	12420	0.5	Right
Side Channel out	12436	0.5	Right
Bug sample site 13	12524		in habitat survey unit R315
Side Channel in	12527	0.5	Left

Table A34 cont.

Side Channel out	12538	0.5	Left
Side Channel in	12616	3.0	Left
Side Channel out	12631	2.0	Left
Tributary	12717	1.0	in on right
Tributary	12764	2.0	in on right
Side Channel in	12805	1.0	Right
Side Channel out	12805	0.5	Right
Side Channel in	12846	3.0	Right, wide but low flow
Side Channel out	12858	2.0	Right
Side Channel in	12871	1.0	Left
Side Channel out	12879	1.0	Left
Tributary	12965	1.0	in on left
Side Channel in	12984	1.5	Left
Side Channel out	12993	1.5	Left
Side Channel in	13039	1.0	Right, tributary on right of side channel
Side Channel out	13056	1.5	Right
Tributary	13070	1.0	in on right
Tributary	13114	0.5	in on left, seep-like
Tributary	13170	1.5	in on right
Side Channel in	13218	0.5	Left
Side Channel out	13229	0.5	Left
Side Channel in	13343	0.5	Left
Side Channel out	13357	0.5	Left
Tributary	13372	0.5	in on left

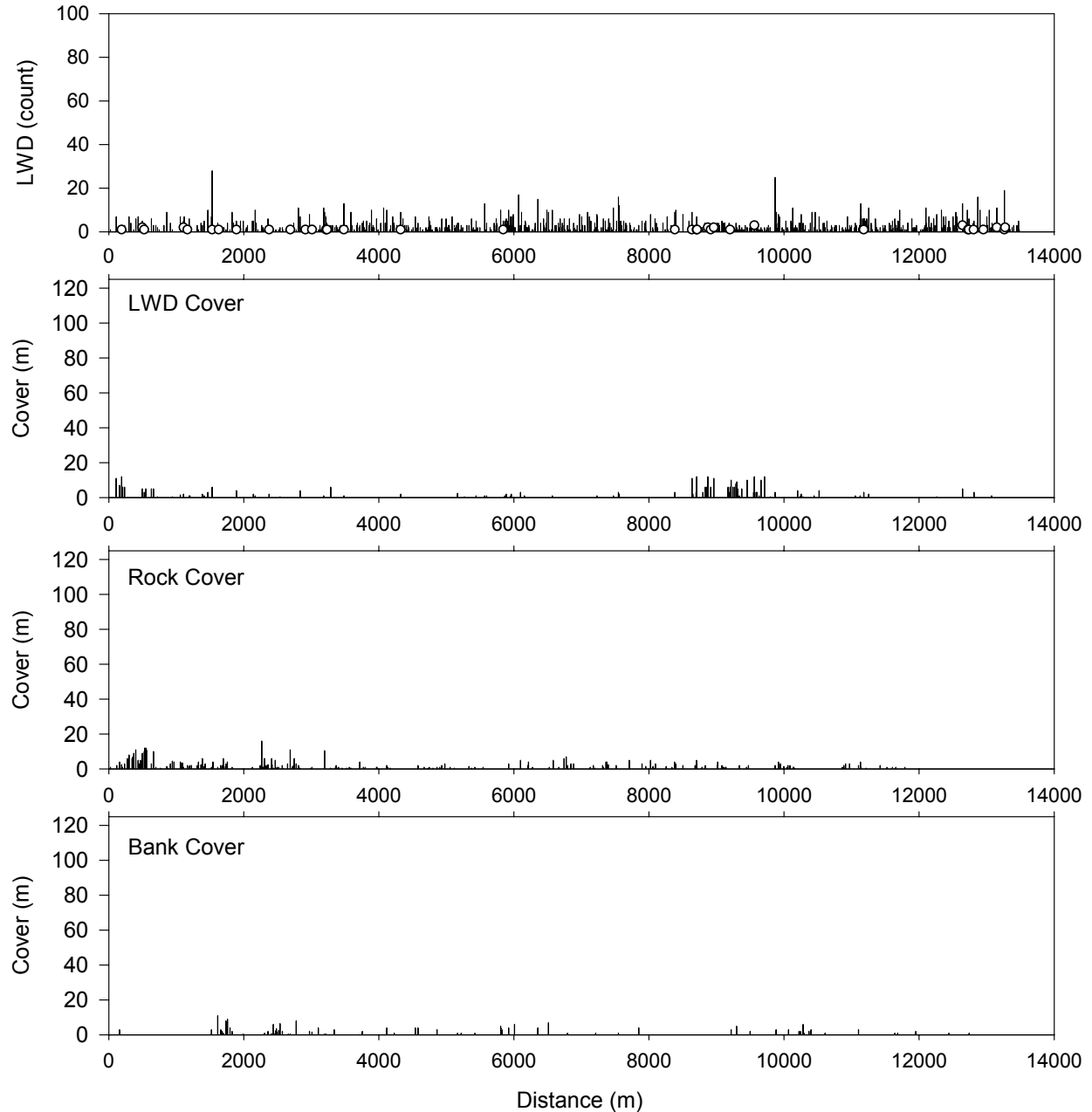


Figure A101. Distribution and abundance of LWD, and distribution of LWD, rock, and bank cover in Chattahoochee River, summer 2002. LWD and cover were recorded for each habitat unit in the stream. Distance is meters upstream of USFS Boundary.

LWD distribution and abundance: Vertical bars indicate total count of LWD. Open circles represent the amount of the total LWD that was >5 m in length, >50 cm in diameter (size 6).

LWD, rock, and bank cover: Cover was defined as linear meters of the cover type within the wetted channel under which a 15 cm long object could be hidden from overhead view. Vertical bars indicate amount of cover in linear meters.

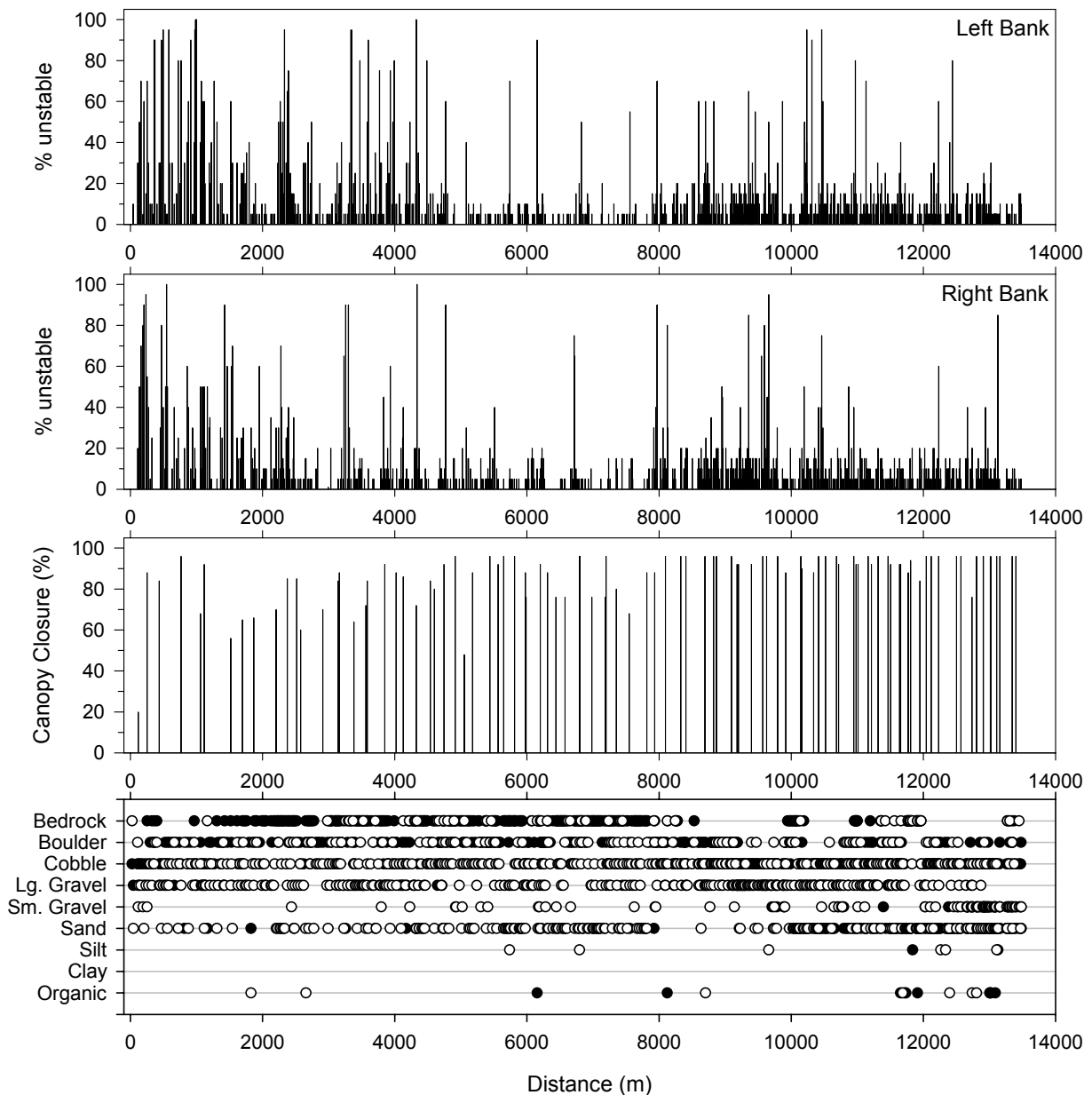


Figure A102. Bank stability, canopy closure and substrate distribution in Chattahoochee River, summer 2002. Bank stability and substrate were recorded for each habitat unit in the stream. Canopy closure was measured where paired samples were recorded. Distance is meters upstream of USFS Boundary.

Bank stability: Left and right bank were recorded as looking upstream. Vertical bars indicate percent of bank identified as unstable.

Canopy closure: Vertical bars indicate percent of canopy closure.

Substrate distribution: Closed circles indicate dominant substrate type, open circles indicate subdominant substrate type.

Table A35. Stream habitat survey summary for Jasus Creek, 2002.

Stream:	Jasus Creek
District:	Chattooga
USGS Quadrangle:	Jacks Gap
Survey Date:	06/02/02
Downstream Starting Point:	confluence with Chattahoochee River
Total Distance Surveyed (km):	5.8

	Pools	Riffles
Percent of Total Stream Area:	32	68
Number:	244	198
Number per km:	42	34
Total Area (m ²):	8001 ± 880	16817 ± 1706
Mean Area (m ²):	33	82
Correction Factor:	0.93	1.02
# of Paired Samples:	23	21
Mean Maximum Depth (cm):	45	25
Mean Average Depth (cm):	27	13
Mean Residual Pool Depth (cm):	15	--
% of Pool Habitat Surveyed as Glides:	0.8	--
% of Riffle Habitat Surveyed as Runs:	--	0.0
% of Riffle Habitat Surveyed as Cascades:	--	17.2
% Pools with > 35% Embeddedness:	77	--

Large Woody Debris Size	Pieces per km
< 5 m long, 5 cm – 10 cm diameter:	106
< 5 m long, 11-50 cm diameter:	73
< 5 m long, >50 cm diameter:	22
> 5 m long, 5 cm – 10 cm diameter:	32
> 5 m long, 11-50 cm diameter:	47
> 5 m long, >50 cm diameter:	18
Rootwads:	2
Total:	300

Riparian Width	Total Width* (m)	Left & Right Width** (m)
Mean	10	8
Maximum	18	92
75 th Percentile	12	3
25 th Percentile	7	1
Minimum	5	0

*Left riparian, right riparian, and bankfull channel widths were added together for calculations

**Left and right riparian widths were grouped (not added) together for calculations

Other Stream Attributes	
Mean Bankfull Channel Width (m):	5
Mean Channel Gradient (%):	7

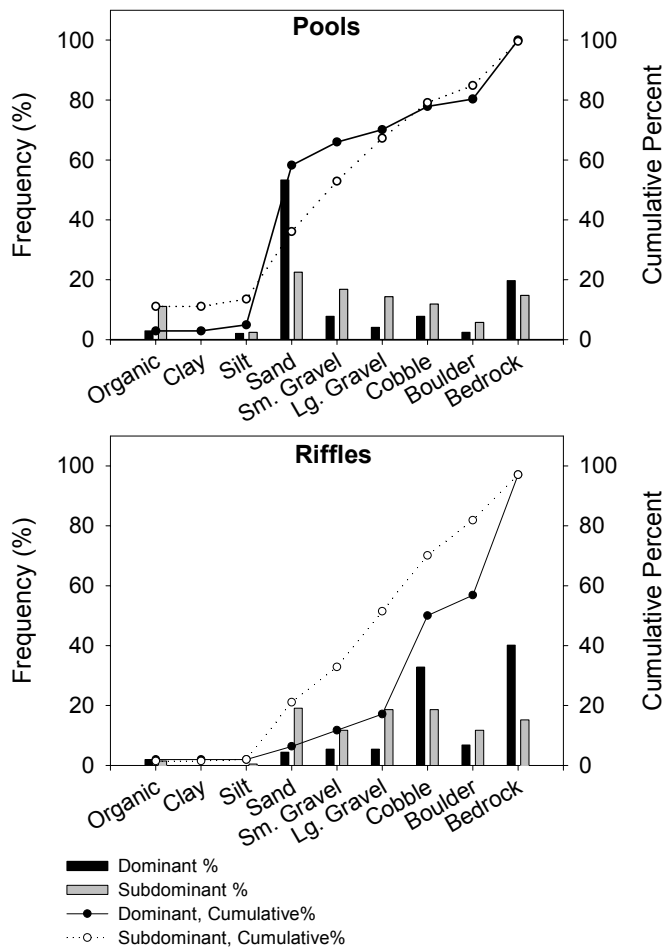


Figure A103. Frequency (percent) and cumulative percent of dominant and subdominant substrate occurrence for pools and riffles in Jasus Creek, summer 2002.

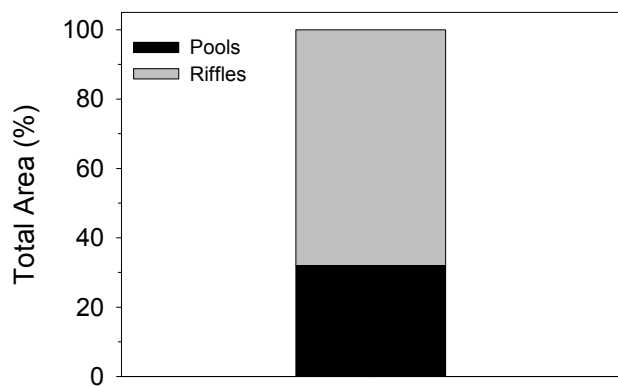


Figure A104. Estimated area of Jasus Creek in pools and riffles as calculated using BVET techniques, summer 2002.

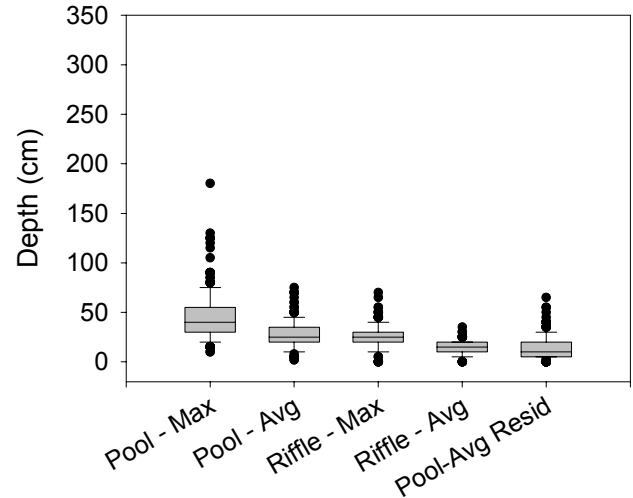


Figure A105. Maximum and average depths and residual pool depths for pools and riffles in Jasus Creek, summer 2002. The top and bottom of the boxes represent the 25th and 75th percentiles, the bar in the center of the box represents the median, whiskers represent the 10th and 90th percentiles, and closed circles represent the entire range of the data.

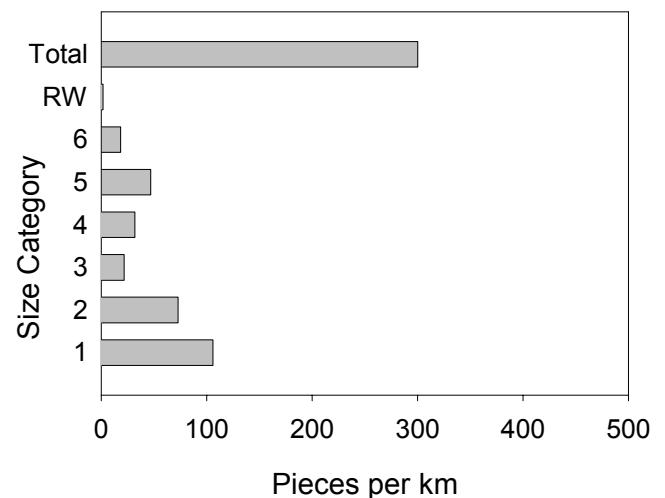


Figure A106. LWD per kilometer in Jasus Creek, summer 2002.

Table A36. Stream features found on Jasus Creek during BVET habitat survey, summer 2002. Distance is meters from start of survey.

Stream Feature	Distance (m)	Width (m)	Comments
Bridge	890.0		Cement replaces banks and cuts into riparian.
Bug sample site 1	995.1		in habitat survey unit R28
Tributary	1103.8	1.5	In on Left
Tributary	1128.5	1.0	In on Left
Tributary	1143.7	1.0	In on right
Tributary	1208.5	1.0	
Tributary	1312.3	1.0	In on right
Tributary	1523.0	0.1	In on right
Tributary	1603.0	0.3	In on right
Tributary	1636.0	1.5	In on Left
Tributary	1742.5	1.0	
Bug sample site 2	2006.0		in habitat survey unit R54
Tributary	2117.9	1.5	
Tributary	2297.0	1.5	
Tributary	2338.4	1.5	Seepage from both left and right banks.
Tributary	2351.6	1.0	Seepage
Tributary	2403.2	1.0	
Fall	2515.5		Height: 115cm
Tributary	2515.5	1.0	In on Left
Tributary	2646.4	1.0	In on Left
Fall	2652.9	1.5	Height: 260 cm
Tributary	2679.9	0.2	In on right
Tributary	2682.3	1.0	In on right
Fall	2727.8		Height: 10.2 m
Tributary	2946.2	0.5	In on right
Bug sample site 3	3003.0		in habitat survey unit C90
Fall	3053.6		Height: 135 cm, some lwd in fall
Fall	3058.1		Height: 140 cm
Tributary	3244.1	0.2	In on Left
Tributary	3280.1	0.2	In on right
Tributary	3321.7	1.5	In on right
Tributary	3422.4	0.2	In on right
Tributary	3518.2	2.0	Left
Side Channel in	3752.7		Right
Tributary	3800.2	2.0	In on Left
Side Channel out	3838.4		Right
Tributary	3844.0	0.1	In on right
Tributary	3920.0	0.3	In on right
Bug sample site 4	3985.0		in habitat survey unit R167
Tributary	4045.5	0.5	In on Left
Tributary	4215.0	1.5	In on Left
Tributary	4244.0	0.3	In on right
Tributary	4280.0	1.0	
Fall	4344.5		Height: 1.5 m
Side Channel in	4345.9		Right
Tributary	4476.9	1.0	In on right
Tributary	4476.9	2.0	In on Left

Table A36 cont.

Tributary	4541.8	1.0	In on Left
Tributary	4562.2	1.0	In on right
Tributary	4572.4	1.5	In on Left
Culvert	4716.5		Corrugated steel, 1m wide, FS Road 52B crossing.
Tributary	4769.6	2.0	In on Left, marked on USGS topo map
Bug sample site 5	4998.0		in habitat survey unit R167
Tributary	5094.1	1.0	In on right
Tributary	5138.3	0.5	In on Left
Tributary	5179.7	0.5	In on Left
Tributary	5192.2	1.0	In on right
Tributary	5194.4	0.5	In on Left
Braid	5239.0		
Tributary	5288.6	0.5	In on Left
Tributary	5368.8	2.0	In on Left
Side Channel in	5443.7		Right
Side Channel out	5452.9		Right
Tributary	5549.3	0.5	In on Left
Braid	5559.4		
Tributary	5695.6	0.5	In on right

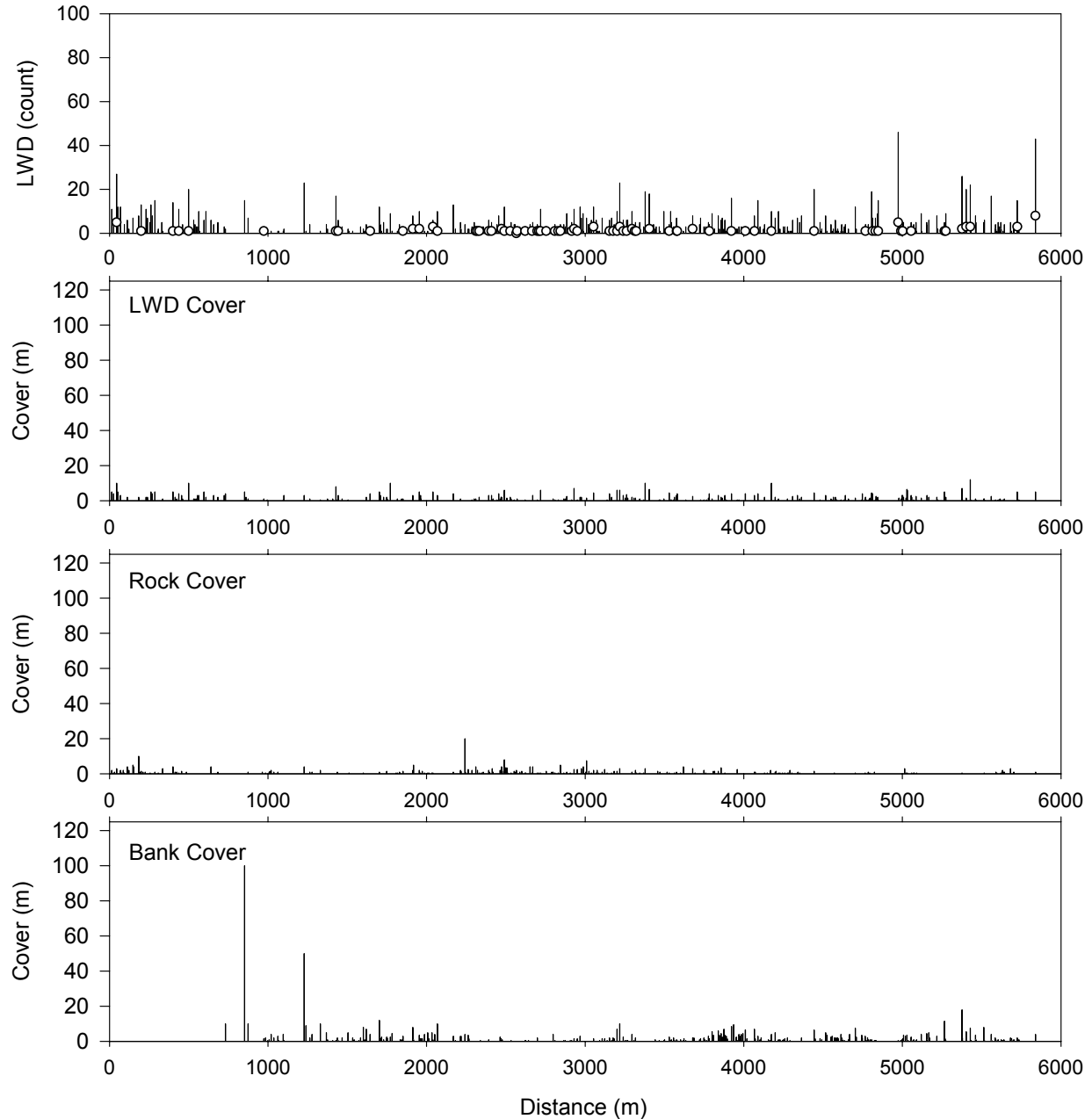


Figure A107. Distribution and abundance of LWD, and distribution of LWD, rock, and bank cover in Jasus Creek, summer 2002. LWD and cover were recorded for each habitat unit in the stream. Distance is meters upstream of confluence with Chattahoochee River.

LWD distribution and abundance: Vertical bars indicate total count of LWD. Open circles represent the amount of the total LWD that was >5 m in length, >50 cm in diameter (size 6).

LWD, rock, and bank cover: Cover was defined as linear meters of the cover type within the wetted channel under which a 15 cm long object could be hidden from overhead view. Vertical bars indicate amount of cover in linear meters.

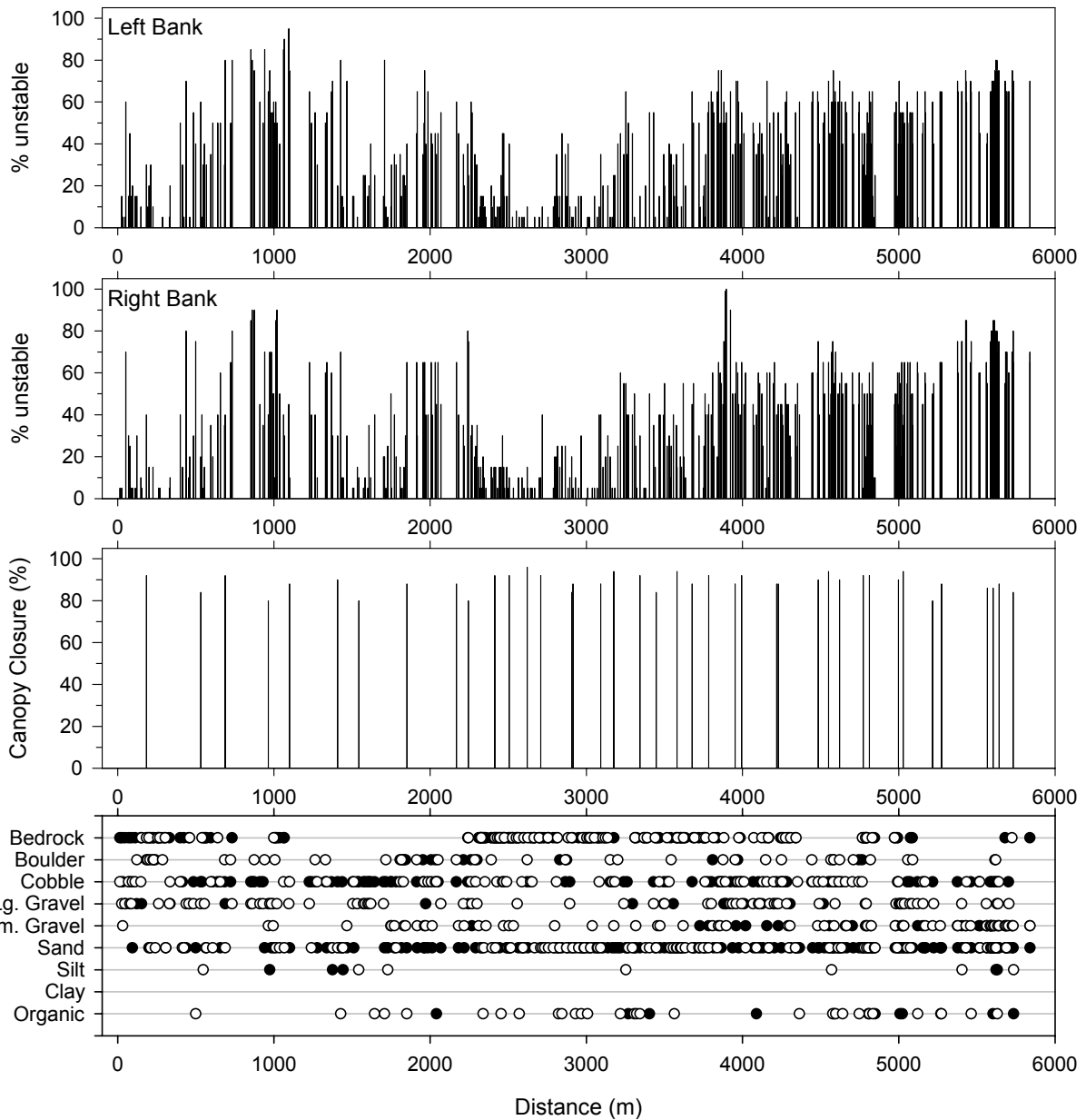


Figure A108. Bank stability, canopy closure and substrate distribution in Jasus Creek, summer 2002. Bank stability and substrate were recorded for each habitat unit in the stream. Canopy closure was measured where paired samples were recorded. Distance is meters upstream of confluence with Chattahoochee River.

Bank stability: Left and right bank were recorded as looking upstream. Vertical bars indicate percent of bank identified as unstable.

Canopy closure: Vertical bars indicate percent of canopy closure.

Substrate distribution: Closed circles indicate dominant substrate type, open circles indicate subdominant substrate type.

Table A37. Stream habitat survey summary for Low Gap Creek, 2002.

Stream:	Low Gap Creek
District:	Chattooga
USGS Quadrangle:	Jacks Gap
Survey Date:	05/24/02
Downstream Starting Point:	Confluence with Chattahoochee River
Total Distance Surveyed (km):	7.7

	Pools	Riffles
Percent of Total Stream Area:	40	60
Number:	406	259
Number per km:	53	34
Total Area (m ²):	17018 ± 8818	25966 ± 2530
Mean Area (m ²):	42	100
Correction Factor:	1.00	1.16
# of Paired Samples:	41	24
Mean Maximum Depth (cm):	43	28
Mean Average Depth (cm):	28	18
Mean Residual Pool Depth (cm):	11	--
% of Pool Habitat Surveyed as Glides:	0.0	--
% of Riffle Habitat Surveyed as Runs:	--	0.8
% of Riffle Habitat Surveyed as Cascades:	--	6.9
% Pools with > 35% Embeddedness:	84	--

Large Woody Debris Size	Pieces per km
< 5 m long, 5 cm – 10 cm diameter:	126
< 5 m long, 11-50 cm diameter:	44
< 5 m long, >50 cm diameter:	2
> 5 m long, 5 cm – 10 cm diameter:	38
> 5 m long, 11-50 cm diameter:	40
> 5 m long, >50 cm diameter:	7
Rootwads:	3
Total:	260

Riparian Width	Total Width* (m)	Left & Right Width** (m)
Mean	12	3
Maximum	31	22
75 th Percentile	13	3
25 th Percentile	8	0
Minimum	4	0

*Left riparian, right riparian, and bankfull channel widths were added together for calculations

**Left and right riparian widths were grouped (not added) together for calculations

Other Stream Attributes	
Mean Bankfull Channel Width (m):	6
Mean Channel Gradient (%):	5

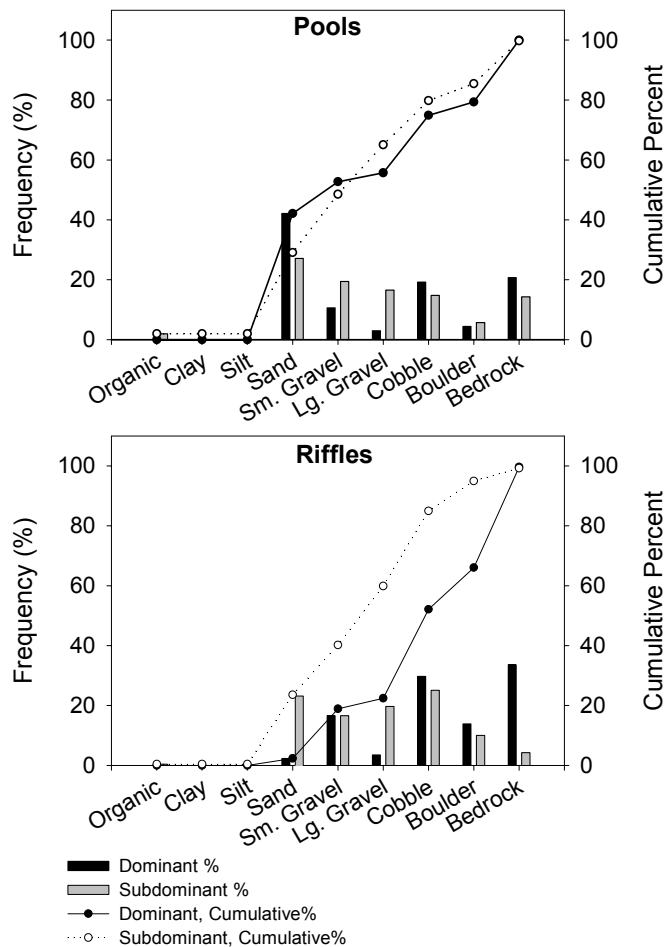


Figure A109. Frequency (percent) and cumulative percent of dominant and subdominant substrate occurrence for pools and riffles in Low Gap Creek, summer 2002.

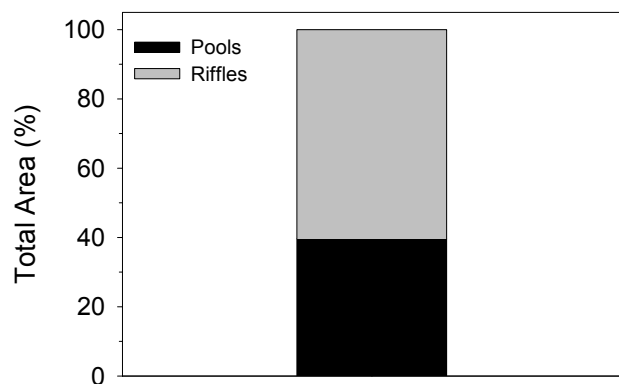


Figure A110. Estimated area of Low Gap Creek in pools and riffles as calculated using BVET techniques, summer 2002.

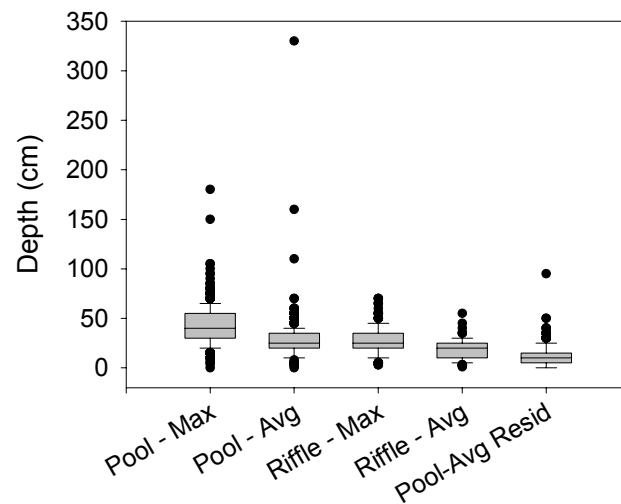


Figure A111. Maximum and average depths and residual pool depths for pools and riffles in Low Gap Creek, summer 2002. The top and bottom of the boxes represent the 25th and 75th percentiles, the bar in the center of the box represents the median, whiskers represent the 10th and 90th percentiles, and closed circles represent the entire range of the data.

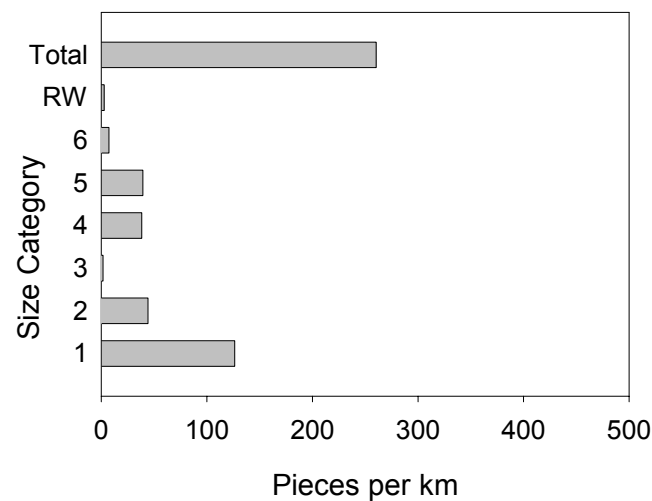


Figure A112. LWD per kilometer in Low Gap Creek, summer 2002.

Table A38. Stream features found on Low Gap Creek during BVET habitat survey, summer 2002.
Distance is meters from start of survey.

Stream Feature	Distance (m)	Width (m)	Comments
Side Channel In	411	2.0	Right
Side Channel Out	423		Left
Side Channel In	469	1.0	Right
Side Channel Out	498		Right, not flowing for about 2m
Side Channel In	528	4.5	Right
Side Channel Out	537		Right
Tributary	560	0.8	in on right
Side Channel In	877	1.0	Left
Side Channel Out	905		Left
Tributary	888	0.3	in on right
Tributary	1084	0.5	in on left
Side Channel In	1189	0.8	Right
Tributary	1250	0.5	in on left
Tributary	1267		
Side Channel Out	1285	0.5	Right
Bridge	1302	4.5	Pool has been carved out under bridge. a popular fishing spot has minimized the riparian corridor
Tributary	1335	0.8	in on right
Tributary	1337	0.5	in on left
Tributary	1431		in on left via culvert, 0.75 m wide
Bug sample site 2	1503		in habitat survey unit R36
Tributary	1517	0.5	in on right
Side Channel In	1540	2.0	Right
Side Channel Out	1547	2.0	Right, water goes under vegetation
Tributary	1587	0.5	in on right
Tributary	1613	0.8	in on right
Tributary	1657	0.5	in on right, travels under gravel trail
Bridge	1661	6.0	pedestrian bridge, not instream
Tributary	1673	0.5	in on right
Ford	1667	14.0	cement, FS Road 44C.
Other	1706		intermittent run off, through campsite on right
Tributary	1711	1.0	in on left
Tributary	1809	2.0	in on left
Tributary	2035	0.3	in on right, under vegetation.
Tributary	2049	1.0	in on left, West Place Branch
Tributary	2110	0.5	in on left
Tributary	2357	0.3	in on right
Tributary	2366	0.3	in on left
Tributary	2391	0.5	in on left
Bug samples site 3	2495		in habitat survey unit R67
Ford	2563	22.5	cement
Tributary	2605	0.5	in on right
Tributary	2745	0.5	in on right
Tributary	2746	0.3	in on left
Tributary	2774	0.3	in on right
Side Channel	2799	1.0	
Side Channel	2809	3.0	

Table A38 cont.

Tributary	2846	0.3	in on right
Tributary	3000	0.3	in on left, trickle
Tributary	3159	4.0	English Camp Branch
Tributary	3200	3.0	in on left
Fall	3333		height 2 m
Fall	3396		height 1.5 m
Fall	3440		height 1 m
Bug samples site 4	3471		in habitat survey unit R101
Fall	3588		height 1.5 m
Fall	3614		height 5 m
Fall	3633		height 4 m
Fall	3693		height 2.5 m
Tributary	3772	0.5	in on left, splits around tree
Tributary	3984	0.8	in on right
Fall	4311		height 15 m
Bug sample site 5	4371		in habitat survey unit C4
Tributary	4543	0.3	in on left
Tributary	4625	0.5	in on right, trickle
Tributary	4640	0.5	in on left, flowing
Tributary	4682	4.0	in on right, split
Tributary	4942	0.3	in on left
Tributary	5024	0.5	in on right, trickle
Tributary	5039	0.5	in on left, flowing
Tributary	5081	4.0	in on right, split
Bug sample site 6	5498		
Tributary	5601	2.0	in on left
Side Channel In	5630	0.5	Left
Side Channel In	5638	1.0	Left
Side Channel Out	5647	0.5	Left
Tributary	5886	0.5	in on left
Side Channel In	5938	0.5	Left
Side Channel Out	5948	0.5	Left
Tributary	6007	1.0	in on right
Side Channel In	6011	0.5	Left
Side Channel Out	6019	0.5	Left
Tributary	6042	0.5	in on left
Side Channel In	6060	2.0	Left
Side Channel Out	6069	2.0	Left
Tributary	6069	1.5	in on right
Tributary	6216	1.0	in on left, trickle
Tributary	6245	0.5	in on right
Tributary	6247	1.0	in on left
Tributary	6264	0.5	in on right. trickle
Tributary	6380	0.5	in on left, seep on right
Tributary	6396	0.5	in on right
Tributary	6491	0.0	on right, dry
Bug sample site 7	6497		
Tributary	6517	2.0	in on right
Tributary	6576	2.0	in on left

Table A38 cont.

Braid	6580		start
Braid	6667		end of braiding
Tributary	6773	0.5	in on left, trickle
Tributary	6829	1.0	in on left
Tributary	6875	0.5	in on right
Tributary	6917	2.0	in on left
Side Channel In	6917	0.5	Right
Side Channel Out	6928	0.5	Right
Tributary	6977	0.5	in on left
Tributary	7006	0.0	in on left, dry
Tributary	7041	0.5	in on right
Side Channel In	7084	0.5	Left
Side Channel Out	7098	1.0	Left
Tributary	7139	0.5	in on right
Tributary	7169	0.5	in on left
Side Channel Out	7257	1.0	Left
Tributary	7295	0.5	in on right, trickle
Tributary	7348	0.5	in on right, trickle
Side Channel In	7353	1.0	Left
Side Channel Out	7360	1.0	Left
Side Channel In	7407	0.5	Left
Side Channel Out	7418	0.5	Left
Underground	7477		goes from 7374 to 7477
Trail Crossing	7555		Appalachian Trail crossing
Side Channel In	7624	0.3	Left
Side Channel Out	7670		Left
Underground	7689		end of survey

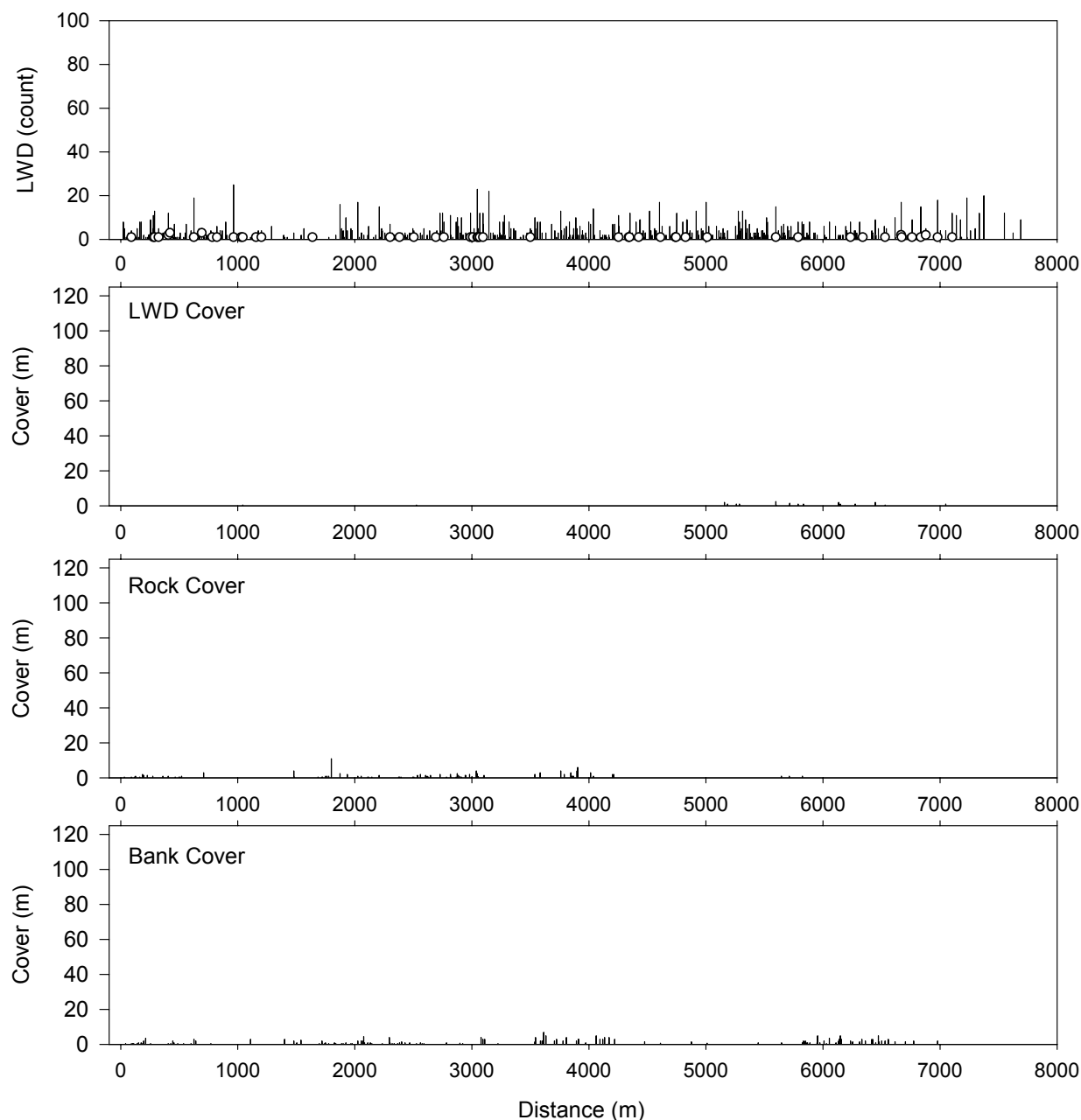


Figure A113. Distribution and abundance of LWD, and distribution of LWD, rock, and bank cover in Low Gap Creek, summer 2002. LWD and cover were recorded for each habitat unit in the stream. Distance is meters upstream of confluence with Chattahoochee River. LWD distribution and abundance: Vertical bars indicate total count of LWD. Open circles represent the amount of the total LWD that was >5 m in length, >50 cm in diameter (size 6). LWD, rock, and bank cover: Cover was defined as linear meters of the cover type within the wetted channel under which a 15 cm long object could be hidden from overhead view. Vertical bars indicate amount of cover in linear meters.

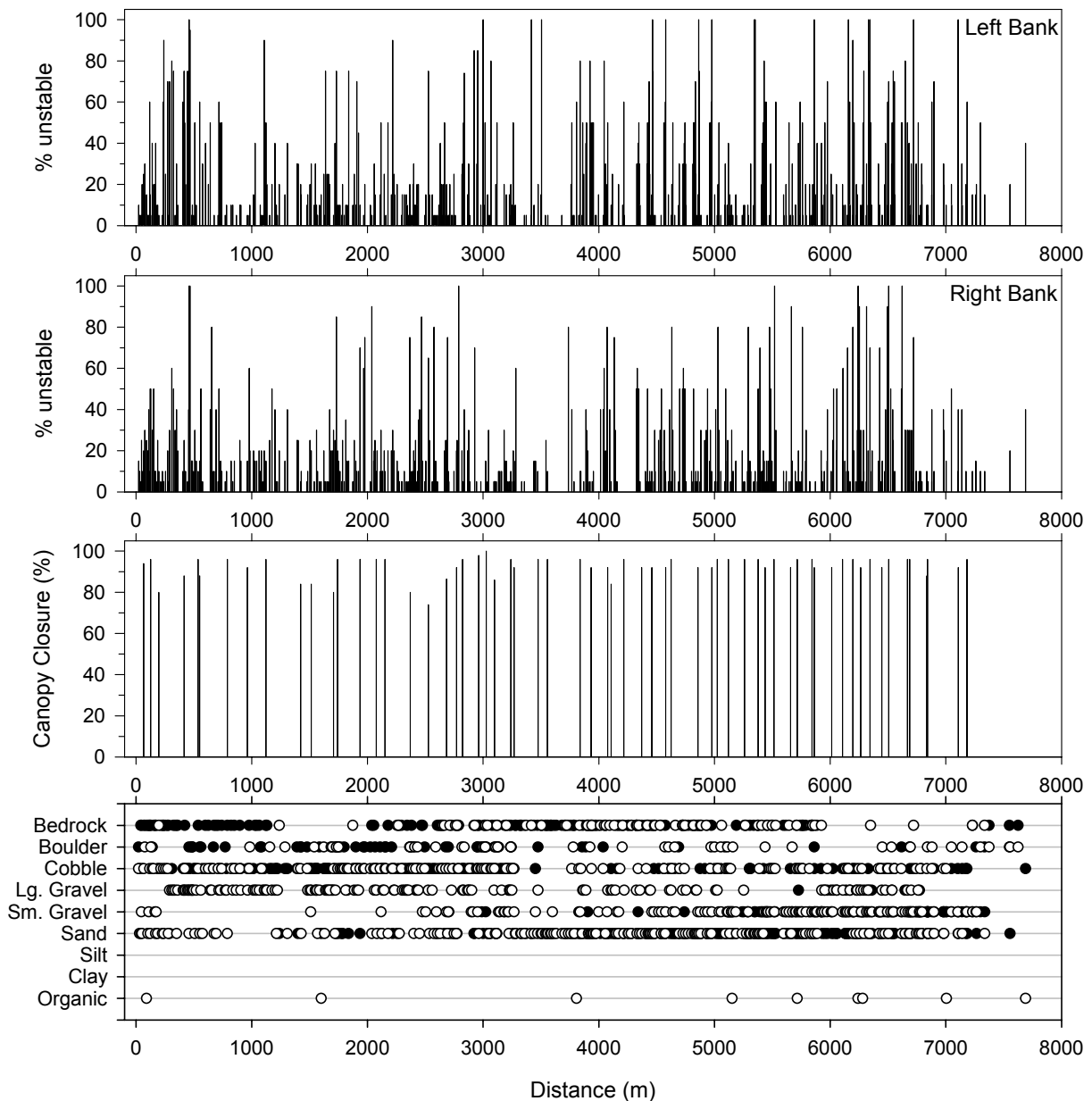


Figure A114. Bank stability, canopy closure and substrate distribution in Low Gap Creek, summer 2002. Bank stability and substrate were recorded for each habitat unit in the stream. Canopy closure was measured where paired samples were recorded. Distance is meters upstream of confluence with Chattahoochee River.

Bank stability: Left and right bank were recorded as looking upstream. Vertical bars indicate percent of bank identified as unstable.

Canopy closure: Vertical bars indicate percent of canopy closure.

Substrate distribution: Closed circles indicate dominant substrate type, open circles indicate subdominant substrate type.

Appendix B: Pebble Count Summaries

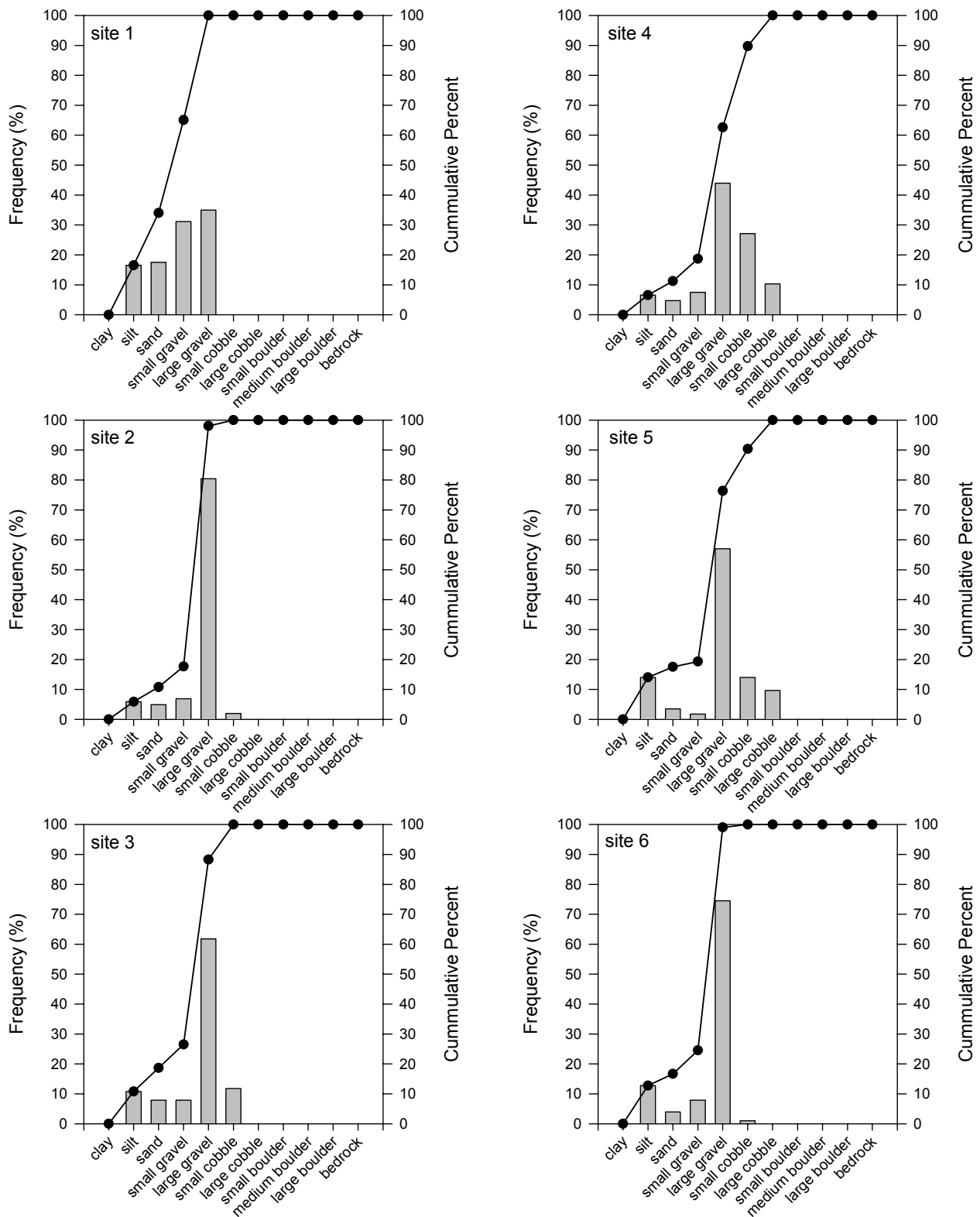


Figure B1. Frequency (%) and cumulative percent of substrate occurrence for pebble counts performed in Big Leatherwood Creek in conjunction with macroinvertebrate sampling, summer 2002. See Table 4 for category size classes.

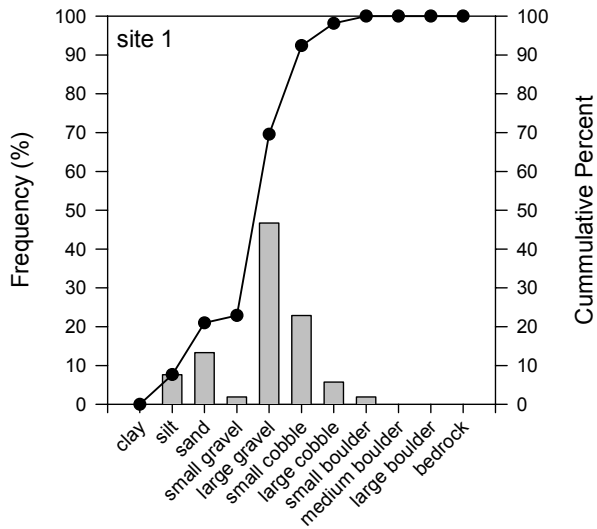


Figure B2. Frequency (%) and cumulative percent of substrate occurrence for pebble count performed in Mill Creek in conjunction with macroinvertebrate sampling, summer 2002. See Table 4 for category size classes.

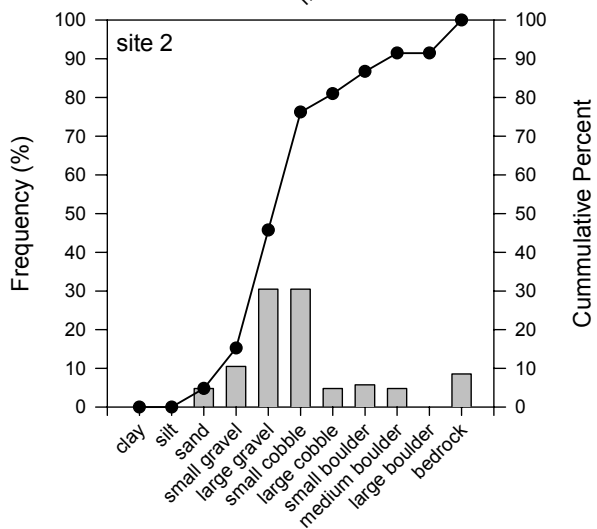
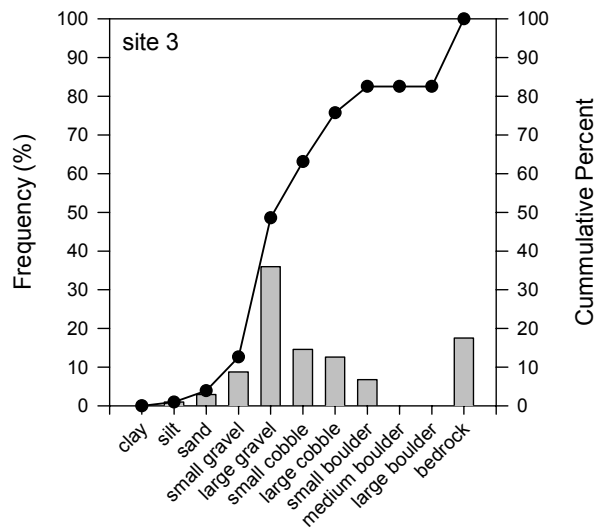
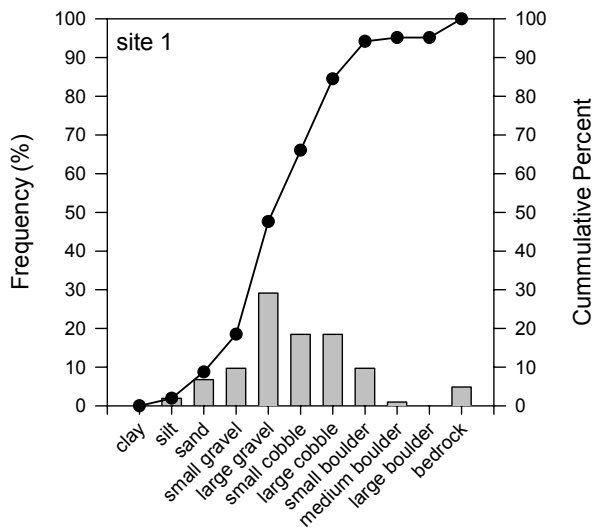


Figure B3. Frequency (%) and cumulative percent of substrate occurrence for pebble counts performed in Addie Branch in conjunction with macroinvertebrate sampling, summer 2002. See Table 4 for category size classes.

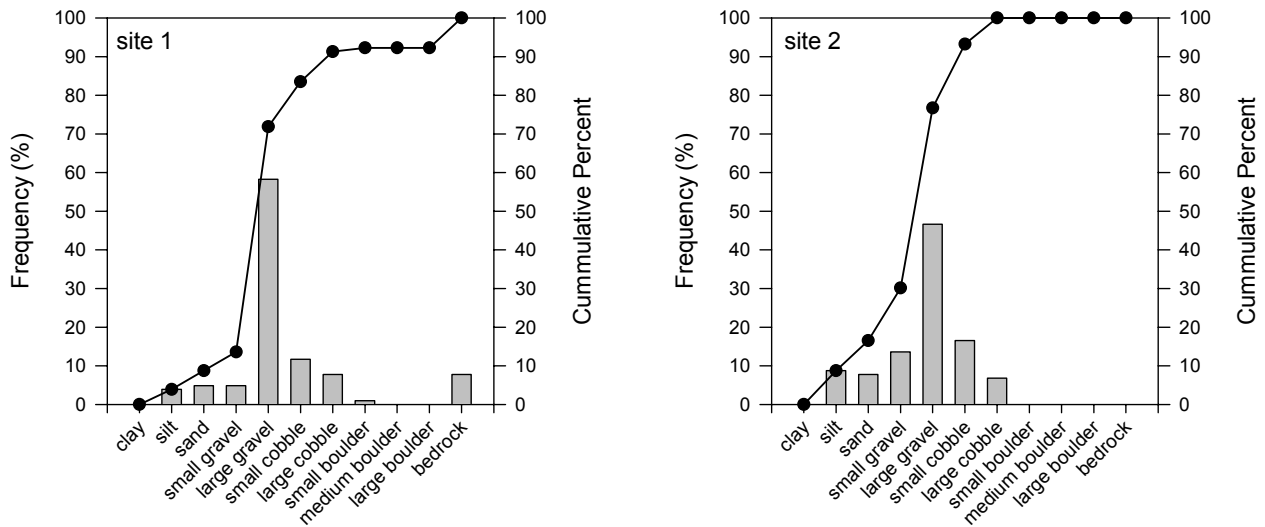


Figure B4. Frequency (%) and cumulative percent of substrate occurrence for pebble counts performed in Bailey Branch in conjunction with macroinvertebrate sampling, summer 2002. See Table 4 for category size classes.

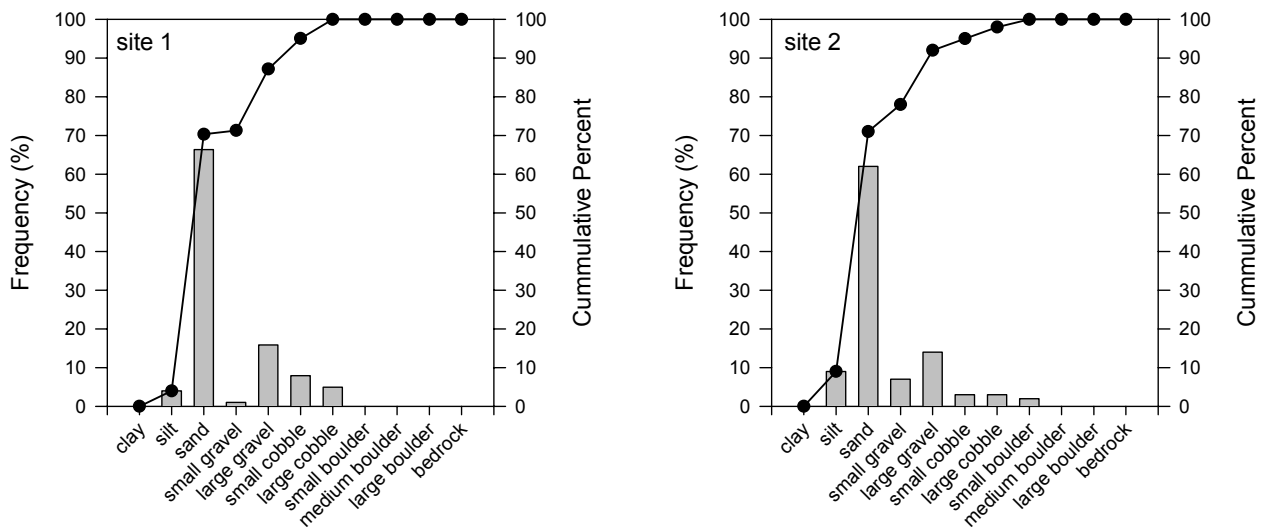


Figure B5. Frequency (%) and cumulative percent of substrate occurrence for pebble counts performed in Billingsley Creek in conjunction with macroinvertebrate sampling, summer 2002. See Table 4 for category size classes.

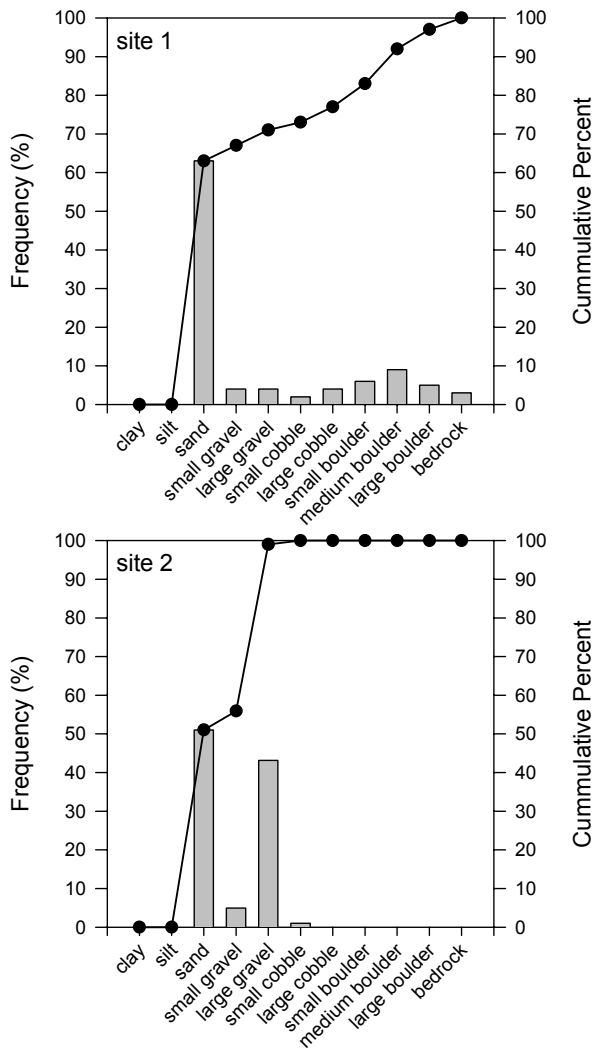


Figure B6. Frequency (%) and cumulative percent of substrate occurrence for pebble counts performed in Gold Mine Branch in conjunction with macroinvertebrate sampling, summer 2002. See Table 4 for category size classes.

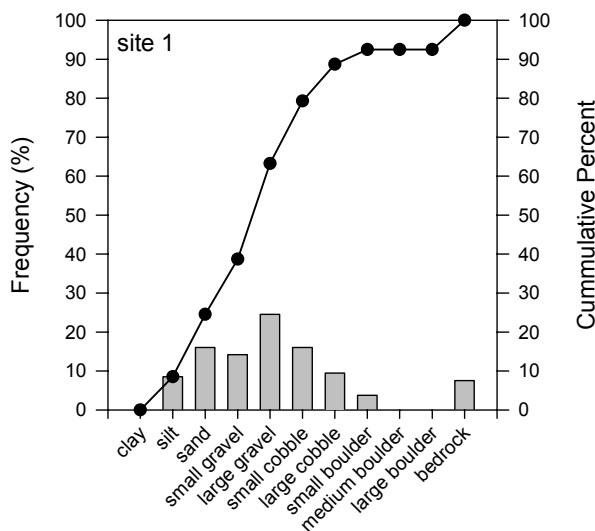


Figure B7. Frequency (%) and cumulative percent of substrate occurrence for pebble count performed in Harden Creek in conjunction with macroinvertebrate sampling, summer 2002. See Table 4 for category size classes.

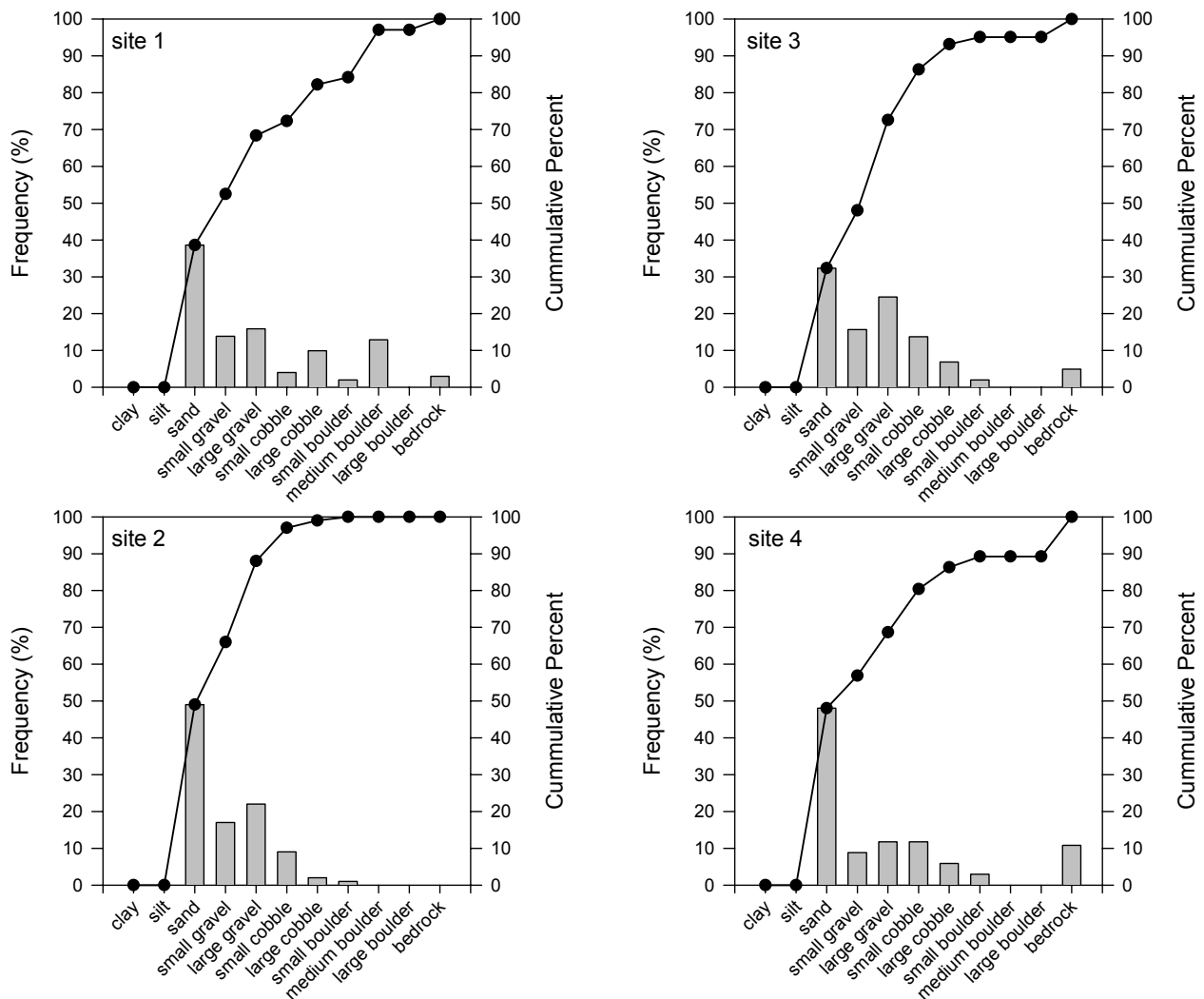


Figure B8. Frequency (%) and cumulative percent of substrate occurrence for pebble counts performed in Hedden Creek in conjunction with macroinvertebrate sampling, summer 2002. See Table 4 for category size classes.

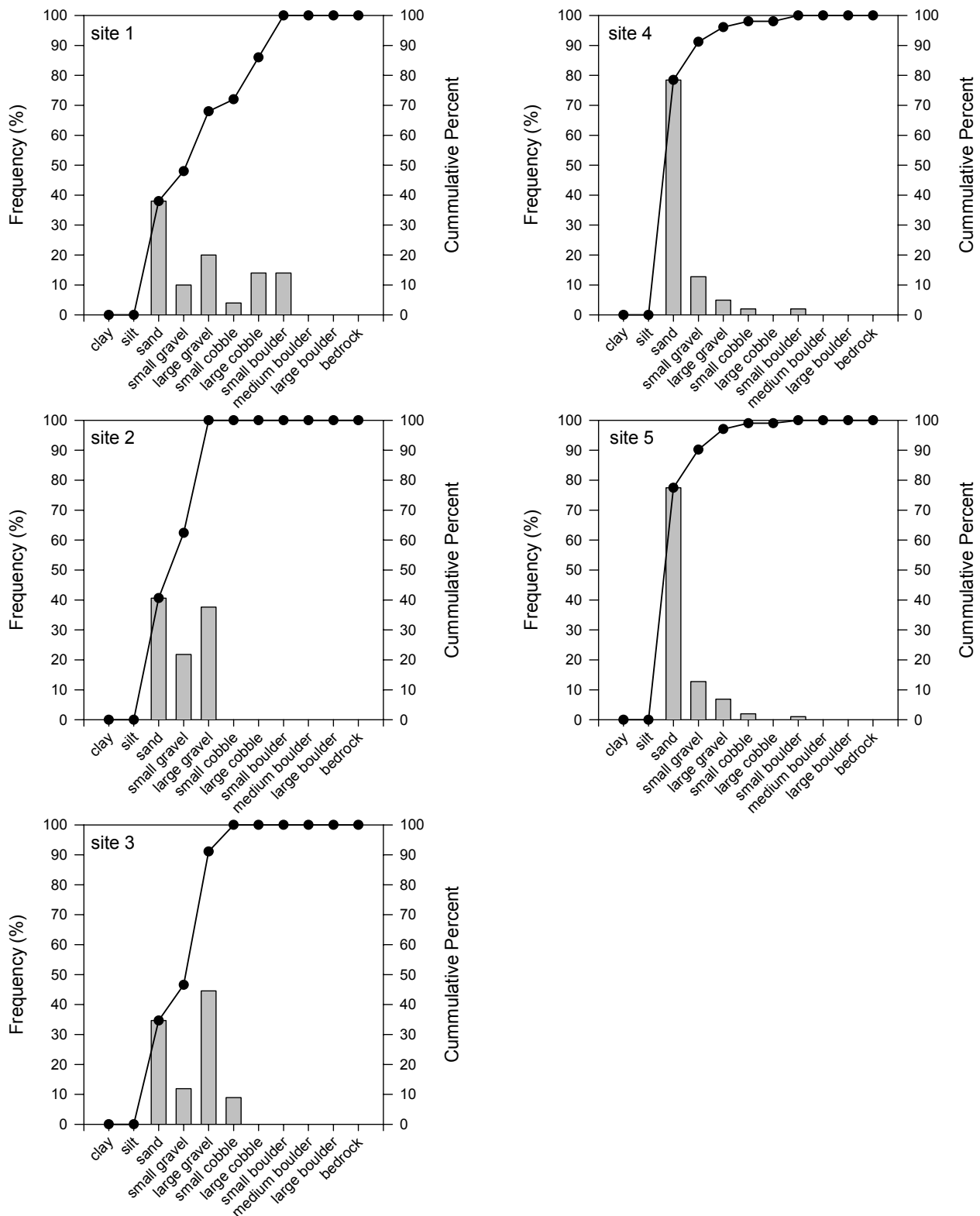


Figure B9. Frequency (%) and cumulative percent of substrate occurrence for pebble counts performed in Pounding Mill Creek in conjunction with macroinvertebrate sampling, summer 2002. See Table 4 for category size classes.

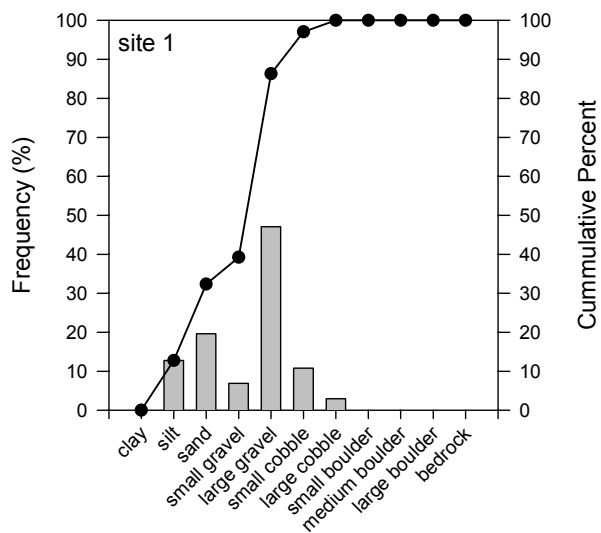


Figure B10. Frequency (%) and cumulative percent of substrate occurrence for pebble count performed in Ridley Branch in conjunction with macroinvertebrate sampling, summer 2002. See Table 4 for category size classes.

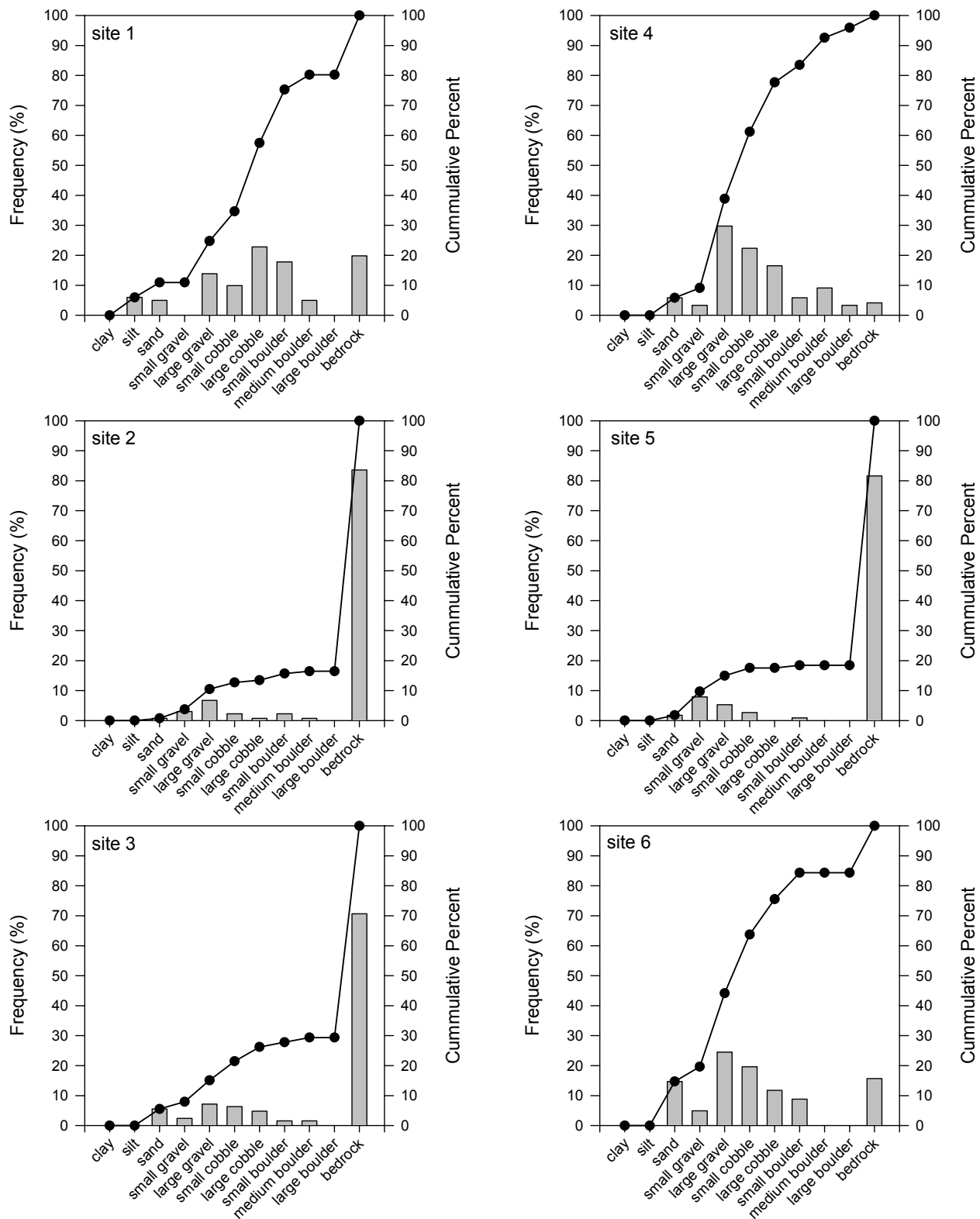


Figure B11. Frequency (%) and cumulative percent of substrate occurrence for pebble counts performed in the Conasauga River (sites 1 thru 6) in conjunction with macroinvertebrate sampling, summer 2002. See Table 4 for category size classes.

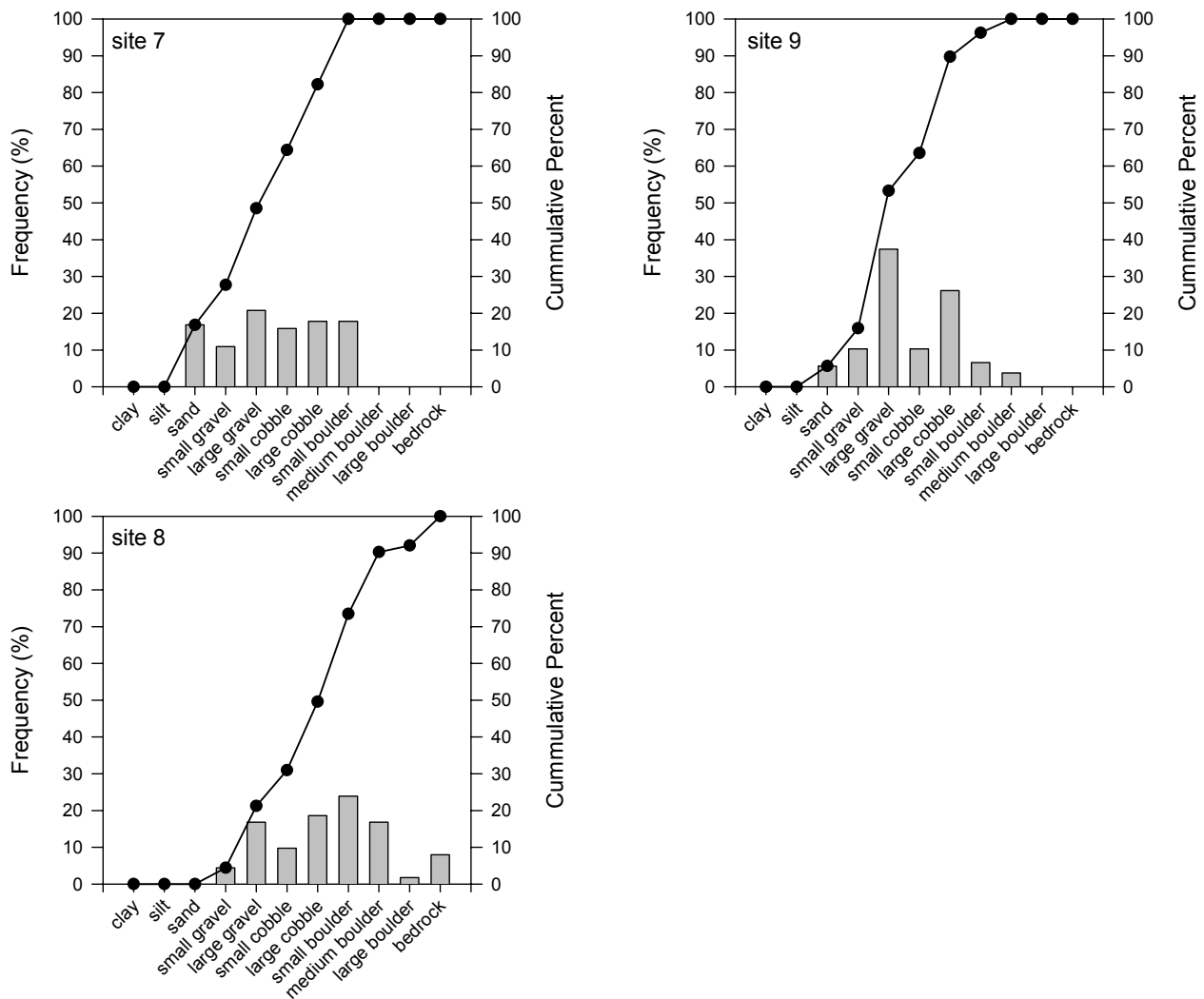


Figure B12. Frequency (%) and cumulative percent of substrate occurrence for pebble counts performed in the Conasauga River (sites 7 thru 9) in conjunction with macroinvertebrate sampling, summer 2002. See Table 4 for category size classes.

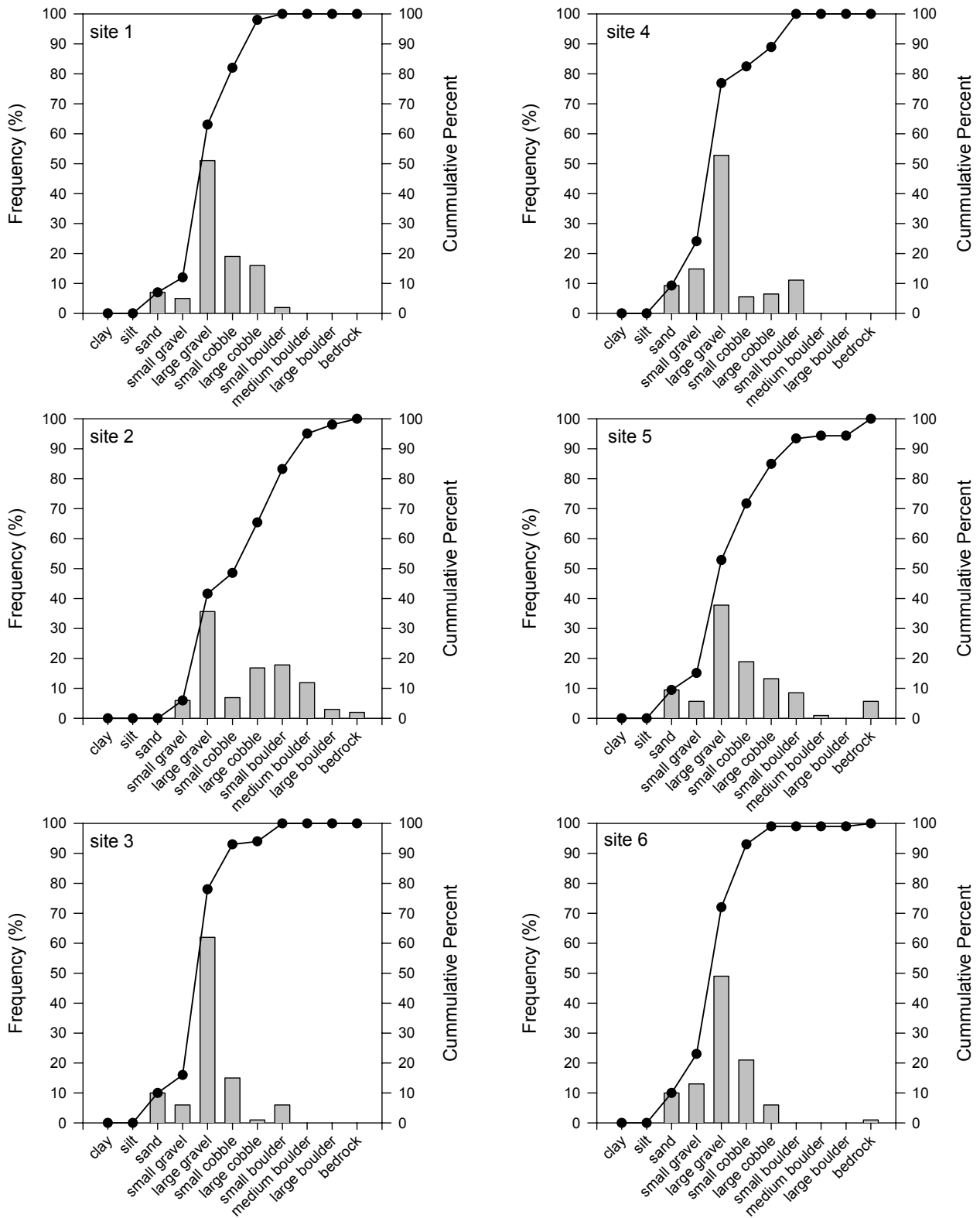


Figure B13. Frequency (%) and cumulative percent of substrate occurrence for pebble counts performed in Sheeds Creek (sites 1 thru 6) in conjunction with macroinvertebrate sampling, summer 2002. See Table 4 for category size classes.

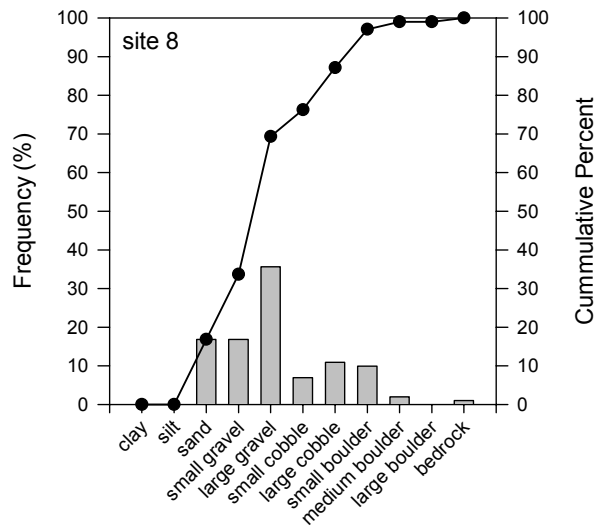
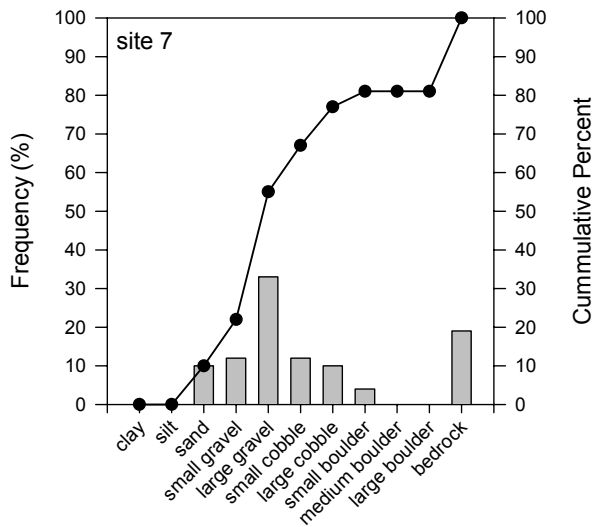


Figure B14. Frequency (%) and cumulative percent of substrate occurrence for pebble counts performed in Sheeds Creek (sites 7 and 8) in conjunction with macroinvertebrate sampling, summer 2002. See Table 4 for category size classes.

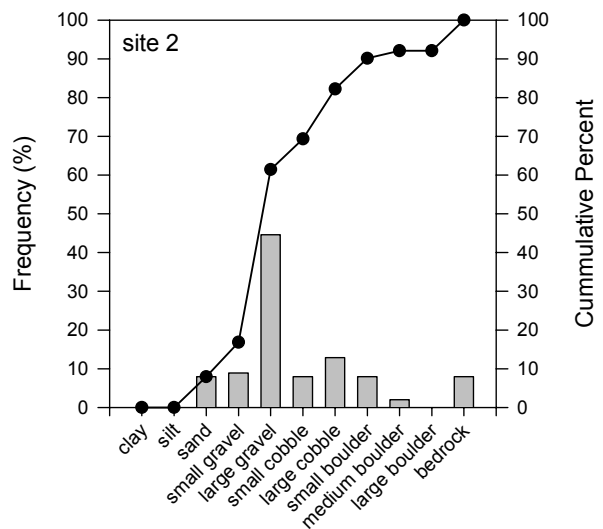
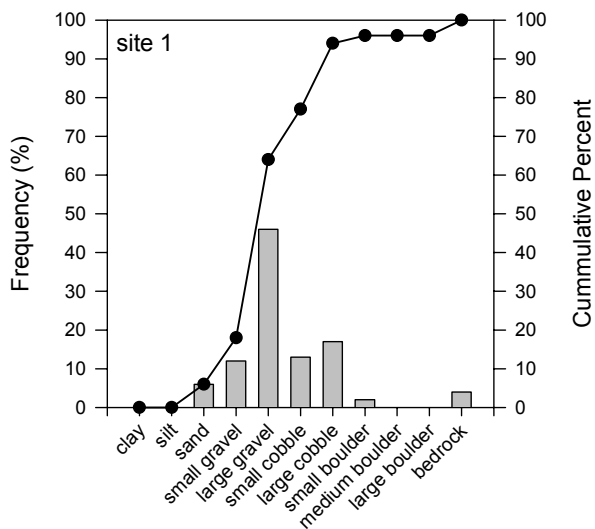


Figure B15. Frequency (%) and cumulative percent of substrate occurrence for pebble counts performed in Sheeds Creek Middle Fork in conjunction with macroinvertebrate sampling, summer 2002. See Table 4 for category size classes.

Appendix C: Macroinvertebrate Report

FINAL REPORT

Submitted: 30 June 2003

Macroinvertebrate Sample Analysis:
Late Spring and Early Summer 2002
USDA Forest Service
Southern Research Station (RWU4202)
Chattahoochee and Oconee National Forest

Dr. J. Reese Voshell Jr.
Department of Entomology
Virginia Polytechnic Institute and State University
Blacksburg, Virginia 24061

In partial fulfillment of Agreement No. SRS 02-CA-11330139-295, USDA Forest Service,
Southern Research Station (RWU4202), Virginia Tech Project No. 208-11-110A-007-332-1 and
FRS No. 428030.

Seventy-three samples of benthic macroinvertebrates that were collected in the late spring and early summer 2002 by the USDA Forest Service from the Chattahoochee National Forest in Georgia were analyzed to the terms of the purchase order. Our analysis of each sample included:

- 1) washing fine detritus and preservative,
- 2) sorting and subsampling of 200 organisms from debris,
- 3) archiving of sample remains,
- 4) identifying all specimens to lowest possible taxonomic level,
- 5) enumerating specimens in each taxon,
- 6) recording counts, taxa names, and taxa codes on bench sheets
- 7) 17 metrics were calculated.
 - Total Taxa
 - Number of EPT Taxa
 - Number of Clinger Taxa
 - Percent Clingers
 - Percent 1 Dominant Taxon
 - Percent 2 Dominant Taxa
 - Percent Tolerant Organisms
 - Intolerant Taxa
 - Percent Diptera
 - Percent Chironomidae
 - Percent EPT
 - North Carolina Biotic Index (NCBI)
 - Percent Collectors
 - Percent Filterers
 - Percent Scrapers
 - Percent Shredders
 - Percent Predators

Taxonomic identifications were made by means of the following references:

Brigham, A. R., W. U. Brigham and A. Gnilka. Eds. 1982. Aquatic insects and oligochaetes of North and South Carolina. Midwest Aquatic Enterprises, Mahomet, Illinois.

Meritt, R. W. and K. W. Cummins, eds. 1984. An introduction to the aquatic insects of North America, 3rd ed. Kendall/Hunt, Dubuque, Iowa.

Pennak, R. W. 1989. Fresh-water invertebrates of the United States, 3rd ed. John Wiley and Sons, New York.

Stewart, K. W. and B. P. Stark. 1989. Nymphs of North American stonefly genera (Plecoptera). Volume 12, Thomas Say Foundation Series, Entomological Society of America, Hyattsville, Maryland.

Wiggins, G. B. 1996. Larvae of North American caddisfly genera (Trichoptera). 2nd ed. University of Toronto Press, Toronto, Ontario.

Each of the 73 samples has been stored in an individual vial. All samples will be returned to USDA Forest Service personnel.

Definitions of metrics used to interpret macroinvertebrate sample results (adapted from Barbour et al. (1999)).

Metric	Definition
Total Number of Individuals	Count of total number of macroinvertebrates in sample; richness measure; generally decreases due to perturbation
Number of Taxa	Count of total number of different genera captured; richness measure; generally decreases due to perturbation
Number of EPT Taxa	Total number of Ephemeroptera, Plecoptera, and Tricoptera taxa collected; richness measure; generally decreases due to perturbation
Number of Clinger Taxa	Total number of taxa with 'clinger' habit (i.e. having fixed retreats or adaptations for attaching to surfaces in flowing water); habit measure; generally decreases due to perturbation
Percent Clingers	Percent of taxa with 'clinger' habit (i.e. having fixed retreats or adaptations for attaching to surfaces in flowing water); habit measure; generally decreases due to perturbation
Percent 1 Dominant Taxa	Number of individuals in the taxa with the greatest number of individuals divided by the total number of individuals; tolerance measure; generally increases due to perturbation
Percent 2 Dominant Taxa	Number of individuals in the two taxa with the greatest number of individuals divided by the total number of individuals; tolerance measure; generally increases due to perturbation
Percent Tolerant Organisms	Percent of individuals considered to be tolerant to various perturbations (here, rated >5 on scale from 0-10); tolerance measure; generally increases due to perturbation
Intolerant Taxa	Total number of genera considered to be sensitive to perturbation; tolerance measure; generally decreases due to perturbation
Percent Diptera	Number of 'true fly' individuals divided by total number of individuals; composition measure; generally increases due to perturbation
Percent Chironomidae	Total number of Chironomids divided by total number of individuals; composition measure; generally increases due to perturbation
Percent EPT	Total number of Ephemeroptera, Plecoptera, and Tricoptera divided by total number of individuals; composition measure; generally decreases due to perturbation
North Carolina Biotic Index	Index that evaluates biological health of stream based on macroinvertebrate community; rating based on scale from 0 to 10 with 0 representing the best water quality and 10 representing the worst
Percent Collectors	Total number of individuals that collect or gather fine particulate matter divided by total number of individuals; functional feeding group measure; variable response to perturbation
Percent Filterers	Total number of individuals that filter fine particulate matter divided by total number of individuals; functional feeding group measure; generally variable response to perturbation
Percent Scrapers	Total number of individuals that graze upon periphyton divided by total number of individuals; functional feeding group measure; variable response to perturbation
Percent Shredders	Total number of individuals that shred coarse particulate matter divided by total number of individuals; functional feeding group measure; variable response to perturbation
Percent Predators	Total number of individuals that feed on other organisms divided by total number of individuals; functional feeding group measure; variable response to perturbation

Macroinvertebrate metrics for samples collected from Addie Branch (AD), June 17, 2002.

	AD01	AD02	AD03
Total Number of Individuals (N)	1025	238	1088
Number of Taxa	53	34	45
Number of EPT Taxa (EPT Taxa)	31	22	30
Number of Clinger Taxa (Clinger Taxa)	19	15	18
Percent Clingers	31.41	36.13	29.78
Percent 1 Dominant Taxon	15.41	19.33	27.39
Percent 2 Dominant Taxa	29.95	26.19	21.64
Percent Tolerant Organisms	20.78	21.01	24.91
# Intolerant Taxa	43	32	38
Percent Diptera	19.32	23.53	22.43
Percent Chironomidae	15.41	19.33	19.12
Percent EPT (%EPT)	66.54	61.34	69.49
North Carolina Biotic Index (NCBI)	2.73	2.81	2.76
Percent Collectors	36.10	28.99	37.50
Percent Filterers	7.80	13.45	11.67
Percent Scrapers	25.46	36.97	9.56
Percent Shredders	19.80	12.18	30.33
Percent Predators	10.73	6.30	10.57

Counts of macroinvertebrates collected from multiple sites in Addie Branch (AD), June 17, 2002.

TAXON	AD01	AD02	AD03
Oligochaeta	27		15
Planariidae	4		
Pleuroceridae			
Sphaeriidae			
Planorbidae			
Hydracarina			
Cambaridae	1	5	4
Asellidae			
Collembola	8		2
Pteronarcys	2		2
Tallaperla	26	10	298
Amphinemura	13	1	12
Perlidae	23		2
Neoperla			
Paragnetina	10		
Agnetina			1
Acroneuria	13		18
Eccoptura xanthenses			
Beloneuria			
Perlesta placida group		3	
Perlodidae			
Yugus			
Isoperla			31
Remenus			2
Chloroperlidae			
Sweltsa			1
Suwallia			
Leuctra	149	16	16
Ephemera		1	
Caenis	1		
Serratella	42		2
Drunella	107	3	6
Ephemerella	3	8	22
Eurylophella	5		
Timpanoga		1	
Baetisca			
Tricorythodes			
Leptophlebiidae			
Paraleptophlebia	30		52
Habrophlebia vibrans			
Habrophlebiodes	16	43	11
Baetis (complex)	78	4	43
Centroptilum			
Stenonema		8	20
Stenocron	1	2	4
Epeorus	9	6	59
Cinygmula			
subaequalis	7		

TAXON	AD01	AD02	AD03
Leucrocuta	4	1	4
Heptagenia	25		
Rhithrogena			
Neoephemera			
Ameletus			
Isonychia	7	1	3
Cordulegaster	2	1	
Corduliidae			
Gomphus			
Stylogomphus			
Progomphus			
Lanthus	7	3	7
Boyeria	3		
Calopteryx			
Gerridae			
Veliidae			
Rhagovelia obesa			
Sialis			
Nigronia			
Nigronia fasciatus			
Nigronia serricornis			
Corydalus cornutus			
Mayatrichia	1		
Hydroptila			
Fattigia pele			
Phryganeidae	1		
Hydropsyche	5		19
Cheumatopsyche			
Diplectrona modesta	40	24	43
Parapsyche			15
Arctopsyche			
Helicopsyche			
Pycnopsyche			1
Goera			
Rhyacophila	8		25
Wormaldia		2	
Chimarra			
Dolophilodes			
distinctus	25	5	37
Lype diversa		3	
Psilotreta			
Molanna			
Setodes			
Ceraclea			
Micrasema	5		
Brachycentrus			
Lepidostoma	6	1	1
Heteroplectron			
Glossosoma	9	2	3

TAXON	AD01	AD02	AD03
Agapetus		1	
Neophylax			
Polycentropus	11		3
Nyctiophylax			
Hydrophilidae			
Gyrinidae			
Psephenus herricki	3		
Ectopria	5	3	10
Helichus			
Stenelmis	1		
Optioservus		14	37
Promoresia	10		2
Oulimnius latiusculus	74	10	11
Macronychus			
Anchytarsus			
Blepharicera			
Tabanidae			
Tipulidae		1	
Tipula	1		
Antocha			1
Dicranota	4	1	4
Hexatoma	6	3	4
Pilaria	17		
Pericoma	1		
Dixa	2	1	
Simulium	3		10
Prosimulium			
Chironomidae	158	46	208
Ceratopogonidae	5	4	14
Atherix			
Hemerodromia	1		3
Chelifera			
Oreogeton			

Macroinvertebrate metrics for samples collected from Ammon Branch (AM), July 1, 2002.

	AM01	AM02	AM03
Total Number of Individuals (N)	353	66	155
Number of Taxa	51	25	23
Number of EPT Taxa (EPT Taxa)	31	14	16
Number of Clinger Taxa (Clinger Taxa)	21	9	7
Percent Clingers	19.83	25.76	14.19
Percent 1 Dominant Taxon	20.68	24.24	27.10
Percent 2 Dominant Taxa	39.38	40.91	37.48
Percent Tolerant Organisms	23.80	34.85	23.87
# Intolerant Taxa	41	22	20
Percent Diptera	22.95	28.79	23.23
Percent Chironomidae	18.70	24.24	20.00
Percent EPT (%EPT)	66.29	48.48	65.81
North Carolina Biotic Index (NCBI)	2.67	3.88	2.49
Percent Collectors	29.46	43.94	24.52
Percent Filterers	6.80	6.06	3.87
Percent Scrapers	11.90	15.15	14.84
Percent Shredders	36.83	22.73	40.00
Percent Predators	14.45	10.61	15.48

Counts of macroinvertebrates collected from multiple sites in Ammon Branch (AM), July 1, 2002.

TAXON	AM01	AM02	AM03
Oligochaeta	3	6	3
Planariidae	1		
Pleuroceridae			
Sphaeriidae	1		
Planorbidae	1		
Hydracarina	1		
Cambaridae	2	1	2
Asellidae			
Collembola	1	1	
Pteronarcys	1		
Tallaperla	47	2	42
Amphinemura	1	1	
Perlidae			
Neoperla			
Paragnetina		1	
Agnetina			
Acroneuria	8	1	4
Eccoptura xanthenses	1		
Beloneuria			2
Perlesta placida group	9		
Perlodidae			
Yugus			4
Isoperla			
Remenus			4
Chloroperlidae	1		1
Sweltsa			
Suwallia			
Leuctra	73	11	18
Ephemera			
Caenis			
Serratella	6		
Drunella	11		
Ephemerella	3		
Eurylophella		1	
Timpanoga			
Baetisca			
Tricorythodes			
Leptophlebiidae			
Paraleptophlebia	7	3	
Habrophlebia vibrans			
Habrophlebiodes	2		10
Baetis (complex)	7	2	1
Centroptilum			
Stenonema	7	4	5
Stenocron	1		
Epeorus	5		1
Cinygmula subaequalis			

TAXON	AM01	AM02	AM03
Leucrocuta	1		
Heptagenia	1		
Rhithrogena	2		
Neophemera			
Ameletus			
Isonychia	5	1	
Cordulegaster		1	
Corduliidae			
Gomphus			
Stylogomphus			
Progomphus			
Lanthus	11	1	4
Boyeria	1		
Calopteryx			
Gerridae			
Veliidae			
Rhagovelia obesa			
Sialis			
Nigronia			
Nigronia fasciatus			
Nigronia serricornis			
Corydalus cornutus			
Mayatrichia			
Hydroptila			
Fattigia pele			
Phryganeidae			
Hydropsyche	4		
Cheumatopsyche			
Diplectrona modesta	1	2	2
Parapsyche			
Arctopsyche	3		
Helicopsyche			
Pycnopsyche			
Goera			
Rhyacophila	6		1
Wormaldia			4
Chimarra			
Dolophilodes			
distinctus	8	1	
Lype diversa	1	1	
Psilotreta			
Molanna			
Setodes			
Ceraclea			
Micrasema			
Brachycentrus			
Lepidostoma	6		2
Heteroplectron			
Glossosoma	2		

TAXON	AM01	AM02	AM03
Agapetus	1		
Neophylax			
Polycentropus	3	1	1
Nyctiophylax			
Hydrophilidae			
Gyrinidae			
Psephenus herricki			
Ectopria	1	2	
Helichus			
Stenelmis			
Optioservus	7		
Promoresia	2		
Oulimnius latiusculus	6	3	8
Macronychus			
Anchytarsus			
Blepharicera			
Tabanidae			
Tipulidae			
Tipula	2	1	
Antocha			
Dicranota	3	1	
Hexatoma	3	1	
Pilaria			
Pericoma			
Dixa	1		2
Simulium	2		
Prosimulium			
Chironomidae	66	16	31
Ceratopogonidae	4		3
Atherix			
Hemerodromia			
Chelifera			
Oreogeton			

Macroinvertebrate metrics for samples collected from Bailey Branch (BA), June 17, 2002.

	BA01	BA02
Total Number of Individuals (N)	626	851
Number of Taxa	51	43
Number of EPT Taxa (EPT Taxa)	31	25
Number of Clinger Taxa (Clinger Taxa)	15	14
Percent Clingers	25.08	26.79
Percent 1 Dominant Taxon	17.09	28.79
Percent 2 Dominant Taxa	17.59	42.66
Percent Tolerant Organisms	16.77	32.08
# Intolerant Taxa	44	36
Percent Diptera	16.93	32.20
Percent Chironomidae	14.86	28.79
Percent EPT (%EPT)	69.17	44.18
North Carolina Biotic Index (NCBI)	2.49	3.23
Percent Collectors	34.66	50.41
Percent Filterers	8.63	4.23
Percent Scrapers	16.29	18.45
Percent Shredders	23.96	17.27
Percent Predators	15.81	9.52

Counts of macroinvertebrates collected from multiple sites in Bailey Branch (BA), June 17, 2002.

TAXON	BA01	BA02
Oligochaeta	5	19
Planariidae	1	
Pleuroceridae		
Sphaeridae	1	
Planorbidae		
Hydracarina		
Cambaridae	4	1
Asellidae		
Collembola	2	4
Pteronarcys		
Tallaperla	31	85
Amphinemura	4	3
Perlidae	2	2
Neoperla		
Paragnetina	4	3
Agnetina	6	
Acroneuria	9	2
Eccoptura xanthenses		
Beloneuria		
Perlesta placida group		2
Perlodidae		
Yugus	3	
Isoperla	3	1
Remenus	4	1
Chloroperlidae		1
Sweltsa	1	
Suwallia		
Leuctra	107	45
Ephemera		
Caenis		
Serratella	73	
Drunella	6	
Ephemerella	5	7
Eurylophella	1	16
Timpanoga		
Baetisca		
Tricorythodes	1	
Leptophlebiidae		
Paraleptophlebia	26	100
Habrophlebia vibrans		
Habrophlebiodes	9	
Baetis (complex)	8	30
Centroptilum		
Stenonema	32	16
Stenocron	1	
Epeorus	1	2
Cinygmula		
subaequalis	8	

TAXON	BA01	BA02
Leucrocuta	1	
Heptagenia		
Rhithrogena		
Neophemera		
Ameletus		1
Isonychia	14	9
Cordulegaster	3	11
Corduliidae		
Gomphus		
Stylogomphus		
Progomphus		
Lanthus	20	31
Boyeria	3	
Calopteryx		
Gerridae		
Veliidae		
Rhagovelia obesa		
Sialis		
Nigronia		
Nigronia fasciatus	4	1
Nigronia serricornis		
Corydalus cornutus		
Mayatrichia		
Hydroptila		
Fattigia pele		
Phryganeidae		
Hydropsyche		
Cheumatopsyche		
Diplectrona modesta	15	14
Parapsyche		
Arctopsyche		
Helicopsyche		
Pycnopsyche		
Goera		
Rhyacophila	19	9
Wormaldia		12
Chimarra		
Dolophilodes		
distinctus	24	
Lype diversa		
Psilotreta		3
Molanna		
Setodes		
Ceraclea		
Micrasema		
Brachycentrus		
Lepidostoma	6	6
Heteroplectron		
Glossosoma	2	3

TAXON	BA01	BA02
Agapetus		
Neophylax		
Polycentropus	7	3
Nyctiophylax		
Hydrophilidae		
Gyrinidae		
Psephenus herricki		
Ectopria	6	8
Helichus		
Stenelmis		
Optioservus	26	
Promoresia	7	8
Oulimnius latiusculus	5	118
Macronychus		
Anchytarsus		
Blepharicera		
Tabanidae		
Tipulidae		
Tipula	2	8
Antocha		
Dicranota	3	2
Hexatoma	3	8
Pilaria	2	
Pericoma		
Dixa		6
Simulium		1
Prosimulium		
Chironomidae	93	245
Ceratopogonidae	1	2
Atherix		
Hemerodromia		1
Chelifera		
Oreogeton	2	1

Macroinvertebrate metrics of samples collected from Big Leatherwood Creek (BL), June 16, 2002.

	BL01	BL02	BL03	BL04	BL05	BL06
Total Number of Individuals (N)	230	427	229	348	406	221
Number of Taxa	15	29	32	28	39	26
Number of EPT Taxa (EPT Taxa)	7	12	12	14	17	9
Number of Clinger Taxa (Clinger Taxa)	8	14	14	14	18	13
Percent Clingers	52.17	58.08	45.41	65.52	50.25	60.63
Percent 1 Dominant Taxon	29.57	33.26	20.52	32.76	16.26	22.17
Percent 2 Dominant Taxa	51.30	31.91	25.99	54.31	31.03	22.25
Percent Tolerant Organisms	24.35	41.22	37.99	30.17	31.28	35.29
# Intolerant Taxa	10	19	25	23	32	22
Percent Diptera	9.13	24.82	24.45	22.99	18.97	21.72
Percent Chironomidae	9.13	24.12	20.52	21.55	14.53	12.22
Percent EPT (%EPT)	62.17	59.25	32.31	50.86	57.14	46.15
North Carolina Biotic Index (NCBI)	4.22	4.81	4.07	4.40	4.11	4.33
Percent Collectors	22.61	28.57	28.82	24.71	22.41	17.19
Percent Filterers	19.13	20.61	13.10	8.33	17.00	28.96
Percent Scrapers	31.74	37.00	28.82	40.23	35.96	30.32
Percent Shredders	0.00	0.23	3.49	19.83	1.97	6.33
Percent Predators	26.52	13.58	25.33	6.90	22.41	16.74

Counts of macroinvertebrates collected from multiple sites in Big Leatherwood Creek (BL), June 16, 2002.

TAXON	BL01	BL02	BL03	BL04	BL05	BL06
Oligochaeta			6	1		
Planariidae						
Pleuroceridae		1	3	2	3	6
Sphaeriidae		1				
Planorbidae						1
Hydracarina	1				1	
Cambaridae			1		1	1
Asellidae						
Collembola						
Pteronarcys						
Tallaperla				1	6	7
Amphinemura						
Perlidae		2				5
Neoperla						
Paragnetina						
Agnetina						
Acroneuria			3	8	22	
Eccoptura xanthenses						
Beloneuria						
Perlesta placida group						
Perlodidae						
Yugus						
Isoperla						
Remenus						
Chloroperlidae						
Sweltsa						
Suwallia						
Leuctra			3	10		4
Ephemera			1	1		
Caenis		2	4	4		
Serratella		9				
Drunella						
Ephemerella						
Eurylophella		1	1			
Timpanoga						
Baetisca						
Tricorythodes	28	5				
Leptophlebiidae			2	2		
Paraleptophlebia					20	
Habrophlebia vibrans						
Habrophlebiodes					19	3
Baetis (complex)	3	2	1	2	8	3
Centropilum						
Stenonema	68	142	22	114	66	17
Stenocron						
Epeorus						

TAXON	BL01	BL02	BL03	BL04	BL05	BL06
Cinygmula subaequalis						
Leucrocuta			8	5	8	
Heptagenia					8	
Rhithrogena						
Neoephemera					3	
Ameletus						
Isonychia	2	13		2	1	
Cordulegaster	3	1	3		2	
Corduliidae						
Gomphus						
Stylogomphus						
Progomphus	3					
Lanthus	50	13	39	5	3	5
Boyeria		3	6	5	3	2
Calopteryx		1				
Gerridae		1				
Veliidae					1	
Rhagovelia obesa		1				
Sialis						
Nigronia		34				
Nigronia fasciatus			1	3	5	12
Nigronia serricornis	4		3		39	
Corydalus cornutus						
Mayatrichia						
Hydroptila						
Fattigia pele						
Phryganeidae						
Hydropsyche	2	2				
Cheumatopsyche	29	62	26	23	60	49
Diplectrona modesta	11			2	5	13
Parapsyche						
Arctopsyche						
Helicopsyche						
Pycnopsyche						
Goera						
Rhyacophila						
Wormaldia						
Chimarra		9			1	1
Dolophilodes						
distinctus				2	1	
Lype diversa		4			1	
Psilotreta					2	
Molanna						
Setodes						
Ceraclea						
Micrasema						
Brachycentrus			2			
Lepidostoma						
Heteroplectron					1	

TAXON	BL01	BL02	BL03	BL04	BL05	BL06
Glossosoma						
Agapetus						
Neophylax			1			
Polycentropus				1		
Nyctiophylax						
Hydrophilidae						
Gyrinidae						
Psephenus herricki		2	12		7	
Ectopria			1	6	1	1
Helichus		2	1	10	3	19
Stenelmis		1		1	14	7
Optioservus		6				10
Promoresia	1					
Oulimnius latiusculus	4		18		14	4
Macronychus				2		
Anchytarsus		1	5	56		3
Blepharicera						
Tabanidae			1			
Tipulidae						
Tipula				2	1	
Antocha			2			
Dicranota						
Hexatoma			1		1	6
Pilaria					9	7
Pericoma						
Dixa			2	1	1	7
Simulium		1	2		1	1
Prosimulium						
Chironomidae	21	103	47	75	59	27
Ceratopogonidae		2	1	2	3	
Atherix						
Hemerodromia					2	
Chelifera						
Oreogeton						

Macroinvertebrate metrics for samples collected from Billingsley Creek (BY), July 3, 2002.

	BY01	BY02
Total Number of Individuals (N)	234	358
Number of Taxa	35	43
Number of EPT Taxa (EPT Taxa)	23	27
Number of Clinger Taxa (Clinger Taxa)	13	14
Percent Clingers	43.16	36.31
Percent 1 Dominant Taxon	19.23	20.95
Percent 2 Dominant Taxa	20.18	34.64
Percent Tolerant Organisms	3.85	6.42
# Intolerant Taxa	32	38
Percent Diptera	5.98	11.73
Percent Chironomidae	2.56	4.47
Percent EPT (%EPT)	80.77	67.32
North Carolina Biotic Index (NCBI)	2.42	2.01
Percent Collectors	16.67	9.50
Percent Filterers	25.64	17.32
Percent Scrapers	15.81	18.16
Percent Shredders	23.50	40.22
Percent Predators	17.52	14.53

Counts of macroinvertebrates collected from multiple sites in Billingsley Creek (BY), July 3, 2002.

TAXON	BY01	BY02
Oligochaeta	2	4
Planariidae		
Pleuroceridae		
Sphaeriidae		
Planorbidae		
Hydracarina		
Cambaridae	2	1
Asellidae		
Collembola		1
Pteronarcys	3	1
Tallaperla	22	75
Amphinemura	1	3
Perlidae		2
Neoperla		
Paragnetina		2
Agnetina		
Acroneuria	5	4
Eccoptura xanthenses		
Beloneuria		1
Perlesta placida group	4	
Perlodidae	1	
Yugus		
Isoperla	4	5
Remenus		1
Chloroperlidae		3
Sweltsa		
Suwallia		
Leuctra	16	49
Ephemera		
Caenis		
Serratella	28	4
Drunella		
Ephemerella	1	1
Eurylophella		1
Timpanoga		
Baetisca		
Tricorythodes		
Leptophlebiidae		
Paraleptophlebia		4
Habrophlebia vibrans		
Habrophlebiodes		
Baetis (complex)	1	1
Centroptilum		
Stenonema	24	6
Stenocron		
Epeorus	1	
Cinygmula subaequalis		
Leucrocuta		

TAXON	BY01	BY02
Heptagenia	3	1
Rhithrogena		
Neophemera		
Ameletus		
Isonychia	8	15
Cordulegaster	1	1
Corduliidae		
Gomphus		
Stylogomphus		
Progomphus		
Lanthus	16	10
Boyeria	1	
Calopteryx		
Gerridae		1
Veliidae		
Rhagovelia obesa		
Sialis		
Nigronia		
Nigronia fasciatus		
Nigronia serricornis		
Corydalus cornutus		
Mayatrichia		
Hydroptila		
Fattigia pele		
Phryganeidae		
Hydropsyche		
Cheumatopsyche		
Diplectrone modesta	45	41
Parapsyche		1
Arctopsyche		
Helicopsyche		
Pycnopsyche	1	
Goera		
Rhyacophila	4	4
Wormaldia	1	
Chimarra		
Dolophilodes distinctus	6	4
Lype diversa		
Psilotreta		
Molanna		
Setodes		
Ceraclea		
Micrasema		
Brachycentrus		1
Lepidostoma	7	9
Heteroplectron		
Glossosoma		1
Agapetus	1	
Neophylax		

TAXON	BY01	BY02
Polycentropus	2	1
Nyctiophylax		
Hydrophilidae		
Gyrinidae		
Psephenus herricki		
Ectopria	4	
Helichus		
Stenelmis		2
Optioservus	4	15
Promoresia	1	
Oulimnius latiusculus		40
Macronychus		
Anchytarsus		
Blepharicera		
Tabanidae		
Tipulidae		
Tipula	5	7
Antocha		1
Dicranota	2	15
Hexatoma		1
Pilaria		
Pericoma		
Dixa		1
Simulium		
Prosimulium		
Chironomidae	6	16
Ceratopogonidae		1
Atherix		
Hemerodromia	1	
Chelifera		
Oreogeton		

Macroinvertebrate metrics for samples collected from Chattahoochee River (CH), June 30, 2002.

	CH01	CH02	CH03	CH04	CH05
Total Number of Individuals (N)	747	576	720	275	1724
Number of Taxa	44	40	43	32	54
Number of EPT Taxa (EPT Taxa)	30	26	26	20	34
Number of Clinger Taxa (Clinger Taxa)	19	17	18	15	24
Percent Clingers	56.49	63.02	65.69	52.36	53.54
Percent 1 Dominant Taxon	13.65	21.18	17.22	25.09	11.43
Percent 2 Dominant Taxa	24.36	15.14	17.53	42.55	22.68
Percent Tolerant Organisms	31.06	24.65	29.03	16.73	28.77
# Intolerant Taxa	36	34	35	28	44
Percent Diptera	17.94	14.76	22.08	12.36	13.40
Percent Chironomidae	13.65	10.07	13.47	8.00	11.43
Percent EPT (%EPT)	72.16	80.03	67.78	57.82	77.15
North Carolina Biotic Index (NCBI)	3.33	2.90	3.33	2.46	3.18
Percent Collectors	42.30	50.87	51.25	22.55	32.60
Percent Filterers	23.83	20.66	20.56	12.73	20.94
Percent Scrapers	20.88	15.80	16.39	53.82	18.04
Percent Shredders	5.76	4.34	3.19	3.27	15.89
Percent Predators	7.10	8.33	8.61	7.64	12.47

	CH06	CH07	CH08	CH09	CH10
Total Number of Individuals (N)	364	482	509	342	623
Number of Taxa	43	39	43	42	33
Number of EPT Taxa (EPT Taxa)	29	26	27	26	21
Number of Clinger Taxa (Clinger Taxa)	19	20	19	19	14
Percent Clingers	39.01	72.20	39.10	44.15	23.43
Percent 1 Dominant Taxon	29.67	22.61	25.15	17.25	51.04
Percent 2 Dominant Taxa	19.96	19.84	41.45	29.53	16.86
Percent Tolerant Organisms	20.60	42.74	13.16	26.90	6.42
# Intolerant Taxa	37	35	35	35	27
Percent Diptera	19.23	21.16	11.59	20.47	7.22
Percent Chironomidae	11.81	4.77	7.66	17.25	4.33
Percent EPT (%EPT)	65.38	65.15	75.05	60.53	85.07
North Carolina Biotic Index (NCBI)	2.52	3.04	2.14	3.25	1.72
Percent Collectors	23.90	13.49	22.20	35.09	23.76
Percent Filterers	12.36	50.83	10.02	8.48	1.44
Percent Scrapers	20.33	25.10	32.61	36.26	61.80
Percent Shredders	34.07	5.39	26.52	8.48	3.69
Percent Predators	9.34	4.98	8.64	11.70	9.31

Counts of macroinvertebrates collected from multiples sites in Chattahoochee River (CH), June 30, 2002.

TAXON	CH01	CH02	CH03	CH04	CH05	CH06	CH07	CH08	CH09	CH10
Oligochaeta	10		1	3	4	4		2	12	2
Planariidae		2	1						1	1
Pleuroceridae										
Sphaeriidae										
Planorbidae										
Hydracarina										
Cambaridae					1		1			
Asellidae										
Collembola								1		
Pteronarcys		5	2		7	5		1		
Tallaperla			1		8	8	3		1	8
Amphinemura					2	1				
Perlidae	5	4	5		117					
Neoperla										
Paragnetina	17	10	11		4		2			
Agnetina										
Acroneuria	13	16	18	9	26	9	10	12	6	14
Eccoptura										
xanthenses										
Beloneuria										
Perlesta placida										
group				2		1		1	3	16
Perlodidae										
Yugus							1			
Isoperla		1			7	2	4	1	1	
Remenus										
Chloroperlidae					1	3		2	1	1
Sweltsa										
Suwallia										
Leuctra	39	10	18	7	138	108	15	128	26	10
Ephemera	1									
Caenis										
Serratella	44	12	18	12	28	1	5	2	9	46
Drunella	50	34	21	48	44	7	21	83	34	318
Ephemerella	2	10	1	2	23	2	12	1	2	
Eurylophella					2					
Timpanoga										
Baetisca										
Tricorythodes										
Leptophlebiidae				2		5	1	4	5	2
Paraleptophlebia	14	19	16		34	2				
Habrophlebia										
vibrans										
Habrophlebiodes		3	3			1				
Baetis (complex)	53	66	124	9	194	21	16	53	9	54
Centropilum										
Stenonema	34	14	17	11	107	6	2	9	42	19
Stenocron	6									

TAXON	CH01	CH02	CH03	CH04	CH05	CH06	CH07	CH08	CH09	CH10
Epeorus	65	122	109	6	79	6	7	10	23	15
Cinygmula										
subaequalis	1	3	3		2					
Leucrocuta	7			1	2	1	1	1		
Heptagenia	1	2	4	1	7	7	7	2	8	1
Rhithrogena				5			1	1		1
Neophemera	1	4								
Ameletus										
Isonychia	13	5	3		1	3	1		1	
Cordulegaster					4					
Corduliidae										
Gomphus										
Stylogomphus										
Progomphus										
Lanthus	6	3	1	2	1	2	1	2	11	2
Boyeria									1	
Calopteryx					1					
Gerridae										
Veliidae					1					
Rhagovelia obesa										
Sialis										
Nigronia										
Nigronia fasciatus										
Nigronia										
serricornis	6	5	7	3	14	1		4	6	5
Corydalus										
cornutus										
Mayatrichia										
Hydroptila	1									
Fattigia pele										
Phryganeidae										
Hydropsyche	26	57	54	14	172	9	109	13	15	7
Cheumatopsyche	80		3		94					
Diplectrona										
modesta					6	6		2	6	1
Parapsyche										
Arctopsyche			4		2		54	17		
Helicopsyche	2	2	3	12			22	2		
Pycnopsyche										1
Goera	1			1	1				1	
Rhyacophila	1	5	10	2	26	5	1	4	2	3
Wormaldia								1		
Chimarra										
Dolophilodes										
distinctus	22	6	23	2	57	9	4	13	3	
Lype diversa					1				1	
Psilotreta						3				1
Molanna										
Setodes	1									

TAXON	CH01	CH02	CH03	CH04	CH05	CH06	CH07	CH08	CH09	CH10
Ceraclea			1							
Micrasema		4		1	20	1	1			
Brachycentrus	27	28	12	12	7	2	4		1	
Lepidostoma	1	6			99	1	7	6	2	4
Heteroplectron	3									
Glossosoma	8	13	4		10		3	8	3	6
Agapetus								2	1	2
Neophylax										
Polycentropus					2	3		3	1	
Nyctiophylax										
Hydrophilidae										
Gyrinidae										
Psephenus herricki	47	8	47	69	47	41	15	17	19	22
Ectopria	1	1	1		1	4	1	2	6	
Helichus										
Stenelmis		1								
Optioservus			2	3	21	1	2		2	2
Promoresia	1	2			22	1	31	2	1	
Oulimnius										
latiusculus	3	8	13	2	46	2	15	38	6	14
Macronychus										
Anchytarsus										
Blepharicera							1			
Tabanidae										
Tipulidae										
Tipula			2	1						
Antocha	17		1	1	1					
Dicranota	1	1	1	2		5	3	1	2	1
Hexatoma	1		4	1	4			4	4	14
Pilaria		1								
Pericoma										
Dixa						3				
Simulium	10	23	49	7	22	16	73	5	3	1
Prosimulium										
Chironomidae	102	58	97	22	197	43	23	39	59	27
Ceratopogonidae	2		1		1			3	1	2
Atherix			1		2		1	3		
Hemerodromia	1	1	3		3	1		1		
Chelifera					1	2	1	3	1	
Oreogeton		1								

Macroinvertebrate metrics for samples collected from Conasauga River (CN), June 19, 2002.

	CN01	CN02	CN03	CN05	CN07
Total Number of Individuals (N)	1085	736	596	735	1242
Number of Taxa	41	44	28	43	45
Number of EPT Taxa (EPT Taxa)	23	28	20	28	30
Number of Clinger Taxa (Clinger Taxa)	19	21	13	22	22
Percent Clingers	68.85	66.30	88.26	68.57	71.74
Percent 1 Dominant Taxon	27.19	15.63	47.32	17.01	15.86
Percent 2 Dominant Taxa	15.87	30.30	59.40	15.65	16.41
Percent Tolerant Organisms	27.10	35.73	22.15	28.16	26.49
# Intolerant Taxa	31	34	23	34	37
Percent Diptera	19.63	20.11	15.27	17.01	18.20
Percent Chironomidae	13.36	15.63	2.85	13.33	15.14
Percent EPT (%EPT)	64.24	66.71	69.97	74.29	70.45
North Carolina Biotic Index (NCBI)	4.05	4.05	4.16	3.77	3.51
Percent Collectors	54.84	45.38	57.38	42.45	39.86
Percent Filterers	17.70	27.72	22.99	28.30	34.14
Percent Scrapers	17.79	17.93	16.28	15.92	16.99
Percent Shredders	5.62	2.04	2.18	3.67	2.50
Percent Predators	3.32	5.84	1.01	7.21	6.52

	CN09	CN11	CN13	CN15	CN17
Total Number of Individuals (N)	464	166	1483	240	853
Number of Taxa	43	35	57	39	45
Number of EPT Taxa (EPT Taxa)	31	20	37	23	31
Number of Clinger Taxa (Clinger Taxa)	20	15	25	18	19
Percent Clingers	73.71	42.17	60.62	56.67	68.00
Percent 1 Dominant Taxon	25.65	19.88	27.51	17.50	22.86
Percent 2 Dominant Taxa	41.16	28.31	17.23	18.13	40.56
Percent Tolerant Organisms	34.27	27.71	20.50	19.17	15.01
# Intolerant Taxa	38	30	46	30	40
Percent Diptera	9.27	24.70	17.33	7.08	6.10
Percent Chironomidae	7.76	19.88	15.37	3.75	5.16
Percent EPT (%EPT)	74.78	46.99	66.35	46.67	62.02
North Carolina Biotic Index (NCBI)	3.51	3.28	3.56	3.24	2.45
Percent Collectors	20.91	37.35	56.71	34.17	21.10
Percent Filterers	43.75	11.45	7.35	5.00	5.86
Percent Scrapers	20.47	29.52	20.63	44.58	63.19
Percent Shredders	10.78	7.83	9.37	8.33	3.17
Percent Predators	4.09	13.86	5.87	7.50	6.68

Counts of macroinvertebrates collected from multiple sites in Conasauga River (CN), June 19, 2002.

TAXON	CN01	CN02	CN03	CN05	CN07	CN09	CN11	CN13	CN15	CN17
Oligochaeta	5	3		6				4	5	15
Planariidae	2	1		2	3	1			1	
Pleuroceridae										
Sphaeriidae										
Planorbidae										
Hydracarina					1					
Cambaridae									1	
Asellidae		1							26	31
Collembola	1						2	5	1	
Pteronarcys					6	2			4	2
Tallaperla			1		2	23	2	51	5	5
Amphinemura										
Perlidae	7	10		3	14			10		10
Neoperla						1				
Paragnetina	9	2		11	20					6
Agnetina								16		
Acroneuria	2	11		10	17	5	4	5	4	4
Eccoptura										
xanthenses										
Beloneuria										
Perlesta placida										
group						2	3			1
Perlodidae										
Yugus										
Isoperla		1	1			5		21	4	12
Remenus										
Chloroperlidae			1		2			2		2
Sweltsa										1
Suwallia										
Leuctra	7	8	1	8	16	3	10	43	11	10
Ephemera				1						
Caenis					1					
Serratella	92	43	14	19	25	9	1	47	3	20
Drunella	12	17	10	3	11	7	4	14	12	58
Ephemerella	3		12		2	11	5	76	6	21
Eurylophella								1		
Timpanoga										
Baetisca								1		
Tricorythodes										
Leptophlebiidae						1	14		1	
Paraleptophlebia		1								1
Habrophlebia										
vibrans										
Habrophlebiodes	11	7		10	10			15		5
Baetis (complex)	295	108	282	125	130	26	4	408	26	33
Centropetium						1			1	
Stenonema	5	11		41	47	4		4	2	13
Stenocron								14		

TAXON	CN01	CN02	CN03	CN05	CN07	CN09	CN11	CN13	CN15	CN17
Epeorus	31	54	9	53	140	8	2	38	2	2
Cinygmula										
subaequalis	1			6	4		1	6		40
Leucrocuta	2	7		6	3	2	4	19		9
Heptagenia		1						16	9	1
Rhithrogena		2						8	1	13
Neophemera	1					1		1		
Ameletus										
Isonychia	41	28	18	5	12	3	2	1		
Cordulegaster							4			1
Corduliidae							1			
Gomphus										
Stylogomphus										
Progomphus										
Lanthus			1	5	1		2	3	2	2
Boyeria							1			
Calopteryx								1		
Gerridae										
Veliidae					1					
Rhagovelia obesa										
Sialis										
Nigronia										
Nigronia fasciatus								2		
Nigronia serricornis	4	4		7	9	1		9	2	7
Corydalus cornutus	1	1	1	1	1					
Mayatrichia	13	1	6	7	2	2				
Hydroptila	8	8	1	18				1		
Fattigia pele										
Phryganeidae										
Hydropsyche	39	64	41	51	106	119	5	43	1	36
Cheumatopsyche	39	51	1	13	12			10		
Diplectrona modesta				3	1	1			3	4
Parapsyche										
Arctopsyche										
Helicopsyche			1			4		1		
Pycnopsyche										
Goera				1		2	1	5	1	
Rhyacophila		1	2		2	1	1	4	1	4
Wormaldia				1		1				
Chimarra			1							
Dolophilodes										
distinctus	15	33		28	79	5		13	3	8
Lype diversa							1			
Psilotreta		2		1	1	1	1	2	2	2
Molanna										
Setodes										
Ceraclea										
Micrasema	52	6	10	10	1	21		40		5
Brachycentrus	11	11	4	93	197	72	12	34	4	

TAXON	CN01	CN02	CN03	CN05	CN07	CN09	CN11	CN13	CN15	CN17
Lepidostoma	1	1	1	9	6	1	1	3		5
Heteroplectron								2		
Glossosoma				6	4	3		7	6	195
Agapetus										
Neophylax										
Polycentropus		1		4	2			2		1
Nyctiophylax		1								
Hydrophilidae								1		
Gyrinidae										
Psephenus herricki	3	12		6	11	2	8	39	24	5
Ectopria	2	2				1	1	3		3
Helichus										
Stenelmis	85	68	11	33	109	10	8	6	1	
Optioservus	13		6	3				2		
Promoresia	54	3	69		3	59	11	164	42	57
Oulimnius										
latiusculus	5	2		1	2		9	3	6	151
Macronychus										
Anchytarsus										
Blepharicera					6				2	
Tabanidae										
Tipulidae										
Tipula	1									
Antocha	7	5	2	1	4	1	1	9		
Dicranota						1	1	7		2
Hexatoma						1				2
Pilaria										
Pericoma								1		
Dixa										
Simulium	47	17	72	14	17	2		8	1	2
Prosimulium										
Chironomidae	145	115	17	98	188	36	33	228	9	44
Ceratopogonidae	1	1		3			5		1	
Atherix	5	8		7	11	2	1	2	4	2
Hemerodromia	7	2		2				2		
Chelifera										
Oreogeton										

Macroinvertebrate metrics for samples collected from Goldmine Branch (GM), July 3, 2002.

	GM01	GM02	GM03
Total Number of Individuals (N)	115	339	955
Number of Taxa	31	39	45
Number of EPT Taxa (EPT Taxa)	16	19	26
Number of Clinger Taxa (Clinger Taxa)	12	18	13
Percent Clingers	40.87	59.00	42.93
Percent 1 Dominant Taxon	24.35	16.22	29.74
Percent 2 Dominant Taxa	36.52	17.18	27.09
Percent Tolerant Organisms	19.13	26.25	9.32
# Intolerant Taxa	24	31	38
Percent Diptera	17.39	21.24	13.30
Percent Chironomidae	12.17	9.73	8.06
Percent EPT (%EPT)	62.61	48.67	71.52
North Carolina Biotic Index (NCBI)	2.88	3.73	2.44
Percent Collectors	20.87	17.99	10.16
Percent Filterers	17.39	14.75	30.99
Percent Scrapers	18.26	41.30	12.36
Percent Shredders	28.70	6.78	32.04
Percent Predators	14.78	18.58	14.45

Counts of macroinvertebrates collected from multiple sites in Goldmine Branch (GM), July 3, 2002.

TAXON	GM01	GM02	GM03
Oligochaeta		1	2
Planariidae			
Pleuroceridae			
Sphaeriidae			
Planorbidae			
Hydracarina			
Cambaridae			
Asellidae			
Collembola			2
Pteronarcys			
Tallaperla	2	3	51
Amphinemura			3
Perlidae	2		4
Neoperla			
Paragnetina			
Agneta			
Acroneuria		1	3
Eccopectura xanthenses			
Beloneuria			
Perlesta placida group		8	
Perlodidae			
Yugus			
Isoperla			13
Remenus			
Chloroperlidae			
Sweltsa			

TAXON	GM01	GM02	GM03
Suwallia			
Leuctra	28	18	229
Ephemera	1		2
Caenis			
Serratella	2		
Drunella		6	4
Ephemerella		9	1
Eurylophella			3
Timpanoga			
Baetisca	1	1	
Tricorythodes			
Leptophlebiidae	3		
Paraleptophlebia			
Habrophlebia vibrans			
Habrophlebiodes			2
Baetis (complex)	1	14	4
Centroptilum			
Stenonema	9	42	37
Stenocron			
Epeorus	1		
Cinygmula subaequalis			
Leucrocuta		1	
Heptagenia			
Rhithrogena			
Neoephemera			
Ameletus			
Isonychia		3	3
Cordulegaster	1	15	32
Corduliidae			
Gomphus			
Stylogomphus			1
Progomphus			
Lanthus	2	3	27
Boyeria	1	4	7
Calopteryx			
Gerridae			
Veliidae			
Rhagovelia obesa			
Sialis	1		
Nigronia			
Nigronia fasciatus			2
Nigronia serricornis	3	2	7
Corydalus cornutus			
Mayatrichia			
Hydroptila		2	
Fattigia pele			
Phryganeidae			
Hydropsyche	1	19	4
Cheumatopsyche	2		1

TAXON	GM01	GM02	GM03
Diplectrona modesta	14	17	284
Parapsyche			
Arctopsyche			
Helicopsyche			
Pycnopsyche			1
Goera		1	2
Rhyacophila	1	2	13
Wormaldia			4
Chimarra			
Dolophilodes distinctus	2		
Lype diversa			2
Psilotreta		2	5
Molanna			
Setodes			
Ceraclea			
Micrasema			
Brachycentrus			
Lepidostoma			3
Heteroplectron			4
Glossosoma		15	1
Agapetus		1	
Neophylax			
Polycentropus	2		
Nyctiophylax			
Hydrophilidae			
Gyrinidae	1	5	
Psephenus herricki		8	
Ectopria			
Helichus		3	
Stenelmis		2	6
Optioservus	10	55	3
Promoresia	2	1	
Oulimnius latiusculus		2	56
Macronychus		1	
Anchytarsus	2		
Blepharicera			
Tabanidae		1	
Tipulidae			
Tipula	1	2	15
Antocha		3	
Dicranota			7
Hexatoma		5	7
Pilaria			12
Pericoma			
Dixa	1		6
Simulium	1	11	
Prosimulium			
Chironomidae	14	33	77
Ceratopogonidae	2	17	1

TAXON	GM01	GM02	GM03
Atherix	1		
Hemerodromia			2
Chelifera			
Oreogeton			

Macroinvertebrate metrics for sample collected from Harden Creek (HR), July 11, 2002.

	HR01
Total Number of Individuals (N)	448
Number of Taxa	35
Number of EPT Taxa (EPT Taxa)	19
Number of Clinger Taxa (Clinger Taxa)	13
Percent Clingers	28.57
Percent 1 Dominant Taxon	28.79
Percent 2 Dominant Taxa	47.77
Percent Tolerant Organisms	21.43
# Intolerant Taxa	31
Percent Diptera	20.76
Percent Chironomidae	18.97
Percent EPT (%EPT)	62.05
North Carolina Biotic Index (NCBI)	2.71
Percent Collectors	27.01
Percent Filterers	12.72
Percent Scrapers	12.72
Percent Shredders	35.49
Percent Predators	11.61

Counts of macroinvertebrates collected from a site in Harden Creek (HR), July 11, 2002.

TAXON	HR01
Oligochaeta	8
Planariidae	
Pleuroceridae	
Sphaeridae	
Planorbidae	
Hydracarina	
Cambaridae	2
Asellidae	
Collembola	2
Pteronarcys	
Tallaperla	18
Amphinemura	
Perlidae	2
Neoperla	
Paragnetina	
Agnetina	
Acroneuria	2
Eccoptura xanthenses	
Beloneuria	
Perlesta placida group	
Perlodidae	
Yugus	
Isoperla	18
Remenus	
Chloroperlidae	
Sweltsa	
Suwallia	
Leuctra	129
Ephemera	2
Caenis	
Serratella	5
Drunella	6
Ephemerella	
Eurylophella	
Timpanoga	
Baetisca	
Tricorythodes	
Leptophlebiidae	
Paraleptophlebia	5
Habrophlebia vibrans	
Habrophlebiodes	
Baetis (complex)	14
Centroptilum	
Stenonema	6
Stenocron	
Epeorus	
Cinygmula subaequalis	
Leucrocuta	1

TAXON	HR01
Heptagenia	
Rhithrogena	
Neophemera	
Ameletus	
Isonychia	2
Cordulegaster	10
Corduliidae	
Gomphus	
Stylogomphus	
Progomphus	
Lanthus	11
Boyeria	
Calopteryx	
Gerridae	
Veliidae	
Rhagovelia obesa	
Sialis	
Nigronia	
Nigronia fasciatus	
Nigronia serricornis	
Corydalus cornutus	
Mayatrichia	
Hydroptila	
Fattigia pele	
Phryganeidae	
Hydropsyche	
Cheumatopsyche	
Diplectrone modesta	54
Parapsyche	
Arctopsyche	
Helicopsyche	
Pycnopsyche	
Goera	
Rhyacophila	2
Wormaldia	
Chimarra	
Dolophilodes distinctus	
Lype diversa	
Psilotreta	
Molanna	
Setodes	
Ceraclea	
Micrasema	3
Brachycentrus	
Lepidostoma	5
Heteroplectron	1
Glossosoma	
Agapetus	
Neophylax	

TAXON	HR01
Polycentropus	3
Nyctiophylax	
Hydrophilidae	
Gyrinidae	
Psephenus herricki	
Ectopria	2
Helichus	
Stenelmis	2
Optioservus	1
Promoresia	8
Oulimnius latiusculus	31
Macronychus	
Anchytarsus	
Blepharicera	
Tabanidae	
Tipulidae	
Tipula	3
Antocha	
Dicranota	2
Hexatoma	1
Pilaria	
Pericoma	
Dixa	
Simulium	1
Prosimulium	
Chironomidae	85
Ceratopogonidae	
Atherix	1
Hemerodromia	
Chelifera	
Oreogeton	

Macroinvertebrate metrics for samples collected from Hedden Creek (HE), July 12, 2002.

	HE01	HE02	HE03	HE04
Total Number of Individuals (N)	509	352	961	155
Number of Taxa	39	46	51	34
Number of EPT Taxa (EPT Taxa)	23	27	26	19
Number of Clinger Taxa (Clinger Taxa)	20	20	19	13
Percent Clingers	39.10	34.09	48.39	46.45
Percent 1 Dominant Taxon	24.75	23.30	15.71	18.71
Percent 2 Dominant Taxa	34.97	14.29	14.43	34.19
Percent Tolerant Organisms	30.45	28.13	15.92	18.06
# Intolerant Taxa	34	39	41	29
Percent Diptera	27.90	28.13	14.98	20.65
Percent Chironomidae	24.75	23.30	11.24	15.48
Percent EPT (%EPT)	60.51	49.43	65.76	61.29
North Carolina Biotic Index (NCBI)	3.32	3.00	2.60	3.16
Percent Collectors	39.10	29.83	19.67	31.61
Percent Filterers	12.57	13.64	16.96	20.00
Percent Scrapers	25.34	24.15	31.01	21.94
Percent Shredders	12.77	16.76	24.56	8.39
Percent Predators	9.63	15.63	7.60	17.42

Counts of macroinvertebrates collected from multiple sites in Hedden Creek (HE), July 12, 2002.

TAXON	HE01	HE02	HE03	HE04
Oligochaeta	5	1	8	1
Planariidae			3	
Pleuroceridae				
Sphaeriidae		2		
Planorbidae				
Hydracarina				
Cambaridae	3		2	1
Asellidae				
Collembola			1	
Pteronarcys	2	3	1	
Tallaperla	5	25	64	1
Amphinemura				
Perlidae				
Neoperla				
Paragnetina			2	
Agnetina				
Acroneuria	11	7	19	6
Eccoptura xanthenses				
Beloneuria				
Perlesta placida group		3		1
Perlodidae				
Yugus		1		
Isoperla		1	13	1
Remenus				
Chloroperlidae			1	
Sweltsa				
Suwallia				
Leuctra	49	27	151	7
Ephemera		7		12
Caenis				
Serratella	49	9	45	5
Drunella	9	16	12	2
Ephemerella		1		
Eurylophella			1	
Timpanoga				
Baetisca				
Tricorythodes				
Leptophlebiidae		1		
Paraleptophlebia			4	
Habrophlebia vibrans				
Habrophlebiodes	7			
Baetis (complex)	8	1	12	4
Centroptilum				
Stenonema	52	10	97	15
Stenocron	3	1		3
Epeorus	8	2	5	
Cinygmula subaequalis			5	
Leucrocuta	4		1	

TAXON	HE01	HE02	HE03	HE04
Heptagenia	9		3	
Rhithrogena				
Neophemera				
Ameletus				
Isonychia	16	15	6	1
Cordulegaster		1	3	1
Corduliidae				
Gomphus				1
Stylogomphus				
Progomphus				
Lanthus	3	24	2	5
Boyeria	1	1	1	2
Calopteryx				
Gerridae				
Veliidae			1	
Rhagovelia obesa				
Sialis				
Nigronia				
Nigronia fasciatus				
Nigronia serricornis	1		3	
Corydalus cornutus				
Mayatrichia				
Hydroptila				
Fattigia pele				
Phryganeidae				
Hydropsyche	17	3	17	1
Cheumatopsyche				
Diplectrona modesta	22	14	123	29
Parapsyche				
Arctopsyche	3	8	5	
Helicopsyche				
Pycnopsyche				
Goera	1		1	1
Rhyacophila	19	6	8	2
Wormaldia	1			
Chimarra				
Dolophilodes distinctus		1		
Lype diversa		1		
Psilotreta		1	11	
Molanna				
Setodes				
Ceraclea				
Micrasema				
Brachycentrus				
Lepidostoma	8	2	18	2
Heteroplectron				
Glossosoma	1	7	7	1
Agapetus				
Neophylax		1		1

TAXON	HE01	HE02	HE03	HE04
Polycentropus	4			
Nyctiophylax				
Hydrophilidae				
Gyrinidae				
Psephenus herricki	3		1	
Ectopria	7	11	8	4
Helichus				
Stenelmis	1	1	3	5
Optioservus	13	23	31	2
Promoresia	4	4	53	3
Oulimnius latiusculus	18	10	65	
Macronychus				
Anchytarsus		1		3
Blepharicera				
Tabanidae				
Tipulidae				
Tipula	1	1	2	
Antocha				
Dicranota	8	2	5	
Hexatoma		2	7	5
Pilaria				
Pericoma				
Dixa			2	
Simulium	5	5	12	
Prosimulium				
Chironomidae	126	82	108	24
Ceratopogonidae		5	1	1
Atherix		1	5	2
Hemerodromia	2		1	
Chelifera		1	1	
Oreogeton				

Macroinvertebrate metrics for samples collected from Jasus Creek (JS), June 19, 2002.

	JS01	JS02	JS03	JS04	JS05
Total Number of Individuals (N)	1281	317	772	246	330
Number of Taxa	49	34	49	32	49
Number of EPT Taxa (EPT Taxa)	31	21	31	22	31
Number of Clinger Taxa (Clinger Taxa)	16	12	16	9	20
Percent Clingers	31.46	26.18	27.59	38.21	43.33
Percent 1 Dominant Taxon	21.47	27.44	26.17	23.98	11.52
Percent 2 Dominant Taxa	42.00	21.59	19.32	33.74	22.73
Percent Tolerant Organisms	23.58	28.71	27.59	23.98	15.76
# Intolerant Taxa	43	31	42	31	41
Percent Diptera	30.60	45.11	33.81	26.83	16.06
Percent Chironomidae	20.53	27.44	26.17	23.98	11.21
Percent EPT (%EPT)	53.63	37.22	56.99	54.88	59.70
North Carolina Biotic Index (NCBI)	2.89	3.54	2.80	3.15	2.68
Percent Collectors	27.09	33.75	33.81	34.55	23.64
Percent Filterers	6.87	3.79	11.53	13.41	14.85
Percent Scrapers	42.23	25.24	20.08	25.61	31.82
Percent Shredders	9.13	12.62	19.30	11.79	8.18
Percent Predators	14.52	23.66	14.77	13.41	20.00

Counts of macroinvertebrates collected from multiple sites in Jasus Creek (JS), June 19, 2002.

TAXON	JS01	JS02	JS03	JS04	JS05
Oligochaeta	9	3	4		4
Planariidae			1		
Pleuroceridae					
Sphaeriidae					2
Planorbidae					
Hydracarina					
Cambaridae	2	3	4	3	5
Asellidae			1		4
Collembola			1		
Pteronarcys	3	2	10	4	6
Tallaperla	6		7	1	5
Amphinemura	1		3	1	
Perlidae	6		1		4
Neoperla					
Paragnetina	19	2	9		4
Agnetina					
Acroneuria	13	8	13	6	11
Eccoptura xanthenses					
Beloneuria				1	
Perlesta placida group				6	
Perlodidae					
Yugus					
Isoperla	1		1		7
Remenus	1			1	3
Chloroperlidae					
Sweltsa			1		
Suwallia			1		
Leuctra	96	33	123	21	6
Ephemera				2	
Caenis					
Serratella	9	4	12	4	1
Drunella	275	17	47	8	16
Ephemerella	3	2	8	10	13
Eurylophella		1			
Timpanoga				1	
Baetisca					
Tricorythodes					
Leptophlebiidae					
Paraleptophlebia	6	2	2		13
Habrophlebia vibrans					
Habrophlebiodes	4	3	16	4	
Baetis (complex)	39	7	3	5	1
Centroptilum					
Stenonema	72	11	22	17	16
Stenocron			1		2
Epeorus	13	1	23	4	3
Cinygmula subaequalis					
Leucrocuta	4	3			4

TAXON	JS01	JS02	JS03	JS04	JS05
Heptagenia	6		10		8
Rhithrogena			2		
Neophemera	1				
Ameletus					1
Isonychia	9	1			3
Cordulegaster					3
Corduliidae					
Gomphus					
Stylogomphus					
Progomphus					
Lanthus	5	5	4	7	12
Boyeria	2		1		
Calopteryx					
Gerridae					
Veliidae					
Rhagovelia obesa					
Sialis					
Nigronia					
Nigronia fasciatus			1	1	
Nigronia serricornis	5				
Corydalus cornutus					
Mayatrichia					
Hydroptila					
Fattigia pele					
Phryganeidae					
Hydropsyche	17		1		1
Cheumatopsyche					
Diplectrone modesta	11	6	53	24	29
Parapsyche					1
Arctopsyche	4		5		
Helicopsyche					
Pycnopsyche	1				1
Goera	1				
Rhyacophila	16	3	20	3	8
Wormaldia					
Chimarra					
Dolophilodes distinctus	39	5	30	9	12
Lype diversa			1		3
Psilotreta					1
Molanna					
Setodes	3				
Ceraclea					
Micrasema					
Brachycentrus					
Lepidostoma	6	3	6	2	7
Heteroplectron					
Glossosoma		1	5		6
Agapetus					
Neophylax					

TAXON	JS01	JS02	JS03	JS04	JS05
Polycentropus	2	3	3	1	1
Nyctiophylax			1		
Hydrophilidae					
Gyrinidae					
Psephenus herricki	119	18			
Ectopria	30	9	11	17	9
Helichus					
Stenelmis					
Optioservus			4		3
Promoresia	1			1	
Oulimnius latiusculus	29	18	39	16	38
Macronychus					
Anchytarsus					
Blepharicera					
Tabanidae					
Tipulidae					
Tipula	4	2			2
Antocha					
Dicranota	6	2	26	3	3
Hexatoma	7	9	5	2	4
Pilaria	98	41	23		2
Pericoma					
Dixa	1		1		
Simulium	8				1
Prosimulium					
Chironomidae	263	87	202	59	37
Ceratopogonidae	2				2
Atherix		1	1	2	1
Hemerodromia			3		1
Chelifera	3	1			
Oreogeton					

Macroinvertebrate metrics for samples collected from Low Gap Creek (LG), June 14, 2002.

	LG01	LG02	LG03	LG04	LG05	LG06	LG07
Total Number of Individuals (N)	402	426	254	222	231	120	166
Number of Taxa	41	34	40	41	38	30	32
Number of EPT Taxa (EPT Taxa)	27	19	26	27	24	23	22
Number of Clinger Taxa (Clinger Taxa)	18	12	19	17	13	13	13
Percent Clingers	48.26	30.52	33.86	45.50	27.27	40.83	54.82
Percent 1 Dominant Taxon	24.13	16.20	17.32	14.86	22.51	20.00	22.89
Percent 2 Dominant Taxa	26.40	19.53	33.86	27.93	14.94	25.83	37.35
Percent Tolerant Organisms	9.45	21.83	20.47	15.32	28.57	23.33	13.86
# Intolerant Taxa	37	30	35	36	33	27	30
Percent Diptera	13.68	31.92	38.19	18.47	27.71	23.33	16.27
Percent Chironomidae	6.97	16.20	17.32	13.06	22.51	20.00	13.25
Percent EPT (%EPT)	57.21	52.11	42.91	65.77	56.28	55.83	54.82
North Carolina Biotic Index (NCBI)	2.34	3.12	3.25	2.76	3.29	3.00	2.64
Percent Collectors	19.65	27.70	30.31	29.28	48.05	45.00	21.08
Percent Filterers	8.96	8.22	3.54	12.16	2.60	4.17	30.72
Percent Scrapers	55.22	34.27	28.35	38.74	22.51	28.33	22.29
Percent Shredders	2.74	11.50	7.48	5.41	8.23	5.83	4.22
Percent Predators	13.18	18.31	29.92	13.06	17.75	16.67	21.69

Counts of macroinvertebrates collected from multiple sites in Low Gap Creek (LG), June 14, 2002.

TAXON	LG01	LG02	LG03	LG04	LG05	LG06	LG07
Oligochaeta	3	2	3	1	11	2	
Planariidae							
Pleuroceridae							
Sphaeriidae							
Planorbidae							
Hydracarina							
Cambaridae	1		1	3	2		
Asellidae							
Collembola					1		1
Pteronarcys	5		3				
Tallaperla	2			2		1	3
Amphinemura							1
Perlidae							
Neoperla							
Paragnetina	2				6		
Agnetina							
Acroneuria	8	1	12	3	10	2	
Eccoptura xanthenses				1			
Beloneuria							
Perlesta placida group			3	9		1	7
Perlodidae							
Yugus							
Isoperla	3		1				2
Remenus					1	1	3
Chloroperlidae				1			
Sweltsa							
Suwallia							
Leuctra	3	43	14	8	11	3	2
Ephemera		1	1	1	10		
Caenis							
Serratella	22	17	3	3	4	6	4
Drunella	82	67	15	33	8	9	1
Ephemerella	3			5	11	1	2
Eurylophella		10				1	
Timpanoga			3	2			
Baetisca							
Tricorythodes					2		
Leptophlebiidae							
Paraleptophlebia		3	3	1	3	2	2
Habrophlebia vibrans	1				3		
Habrophlebiodes		4	1	3			1
Baetis (complex)	2	8	5	5	8	2	
Centroptilum			1				
Stenonema	34	21	12	13	12	1	3
Stenocron			1	1		5	1
Epeorus	14		12	17	6	11	3
Cinygmula subaequalis			2		5		1
Leucrocuta		2		1	2		

TAXON	LG01	LG02	LG03	LG04	LG05	LG06	LG07
Heptagenia	1		3		3		
Rhithrogena	2						
Neophemera	3	1					
Ameletus							
Isonychia	1			1			3
Cordulegaster		1			1		3
Corduliidae							
Gomphus							
Stylogomphus							
Progomphus							
Lanthus	2	6	2	2	11	9	13
Boyeria		2		1	2		
Calopteryx							
Gerridae							
Veliidae							
Rhagovelia obesa							
Sialis							
Nigronia							
Nigronia fasciatus							
Nigronia serricornis	8	7	6	1			
Corydalus cornutus							
Mayatrichia							
Hydroptila							
Fattigia pele				1			
Phryganeidae							
Hydropsyche	3	21	2	1			
Cheumatopsyche	4						
Diplectrona modesta	6		3	20	5	4	38
Parapsyche							
Arctopsyche	9		1	2			9
Helicopsyche		1					
Pycnopsyche			1		2		
Goera					1		
Rhyacophila	3			1	2	4	2
Wormaldia							1
Chimarra							
Dolophilodes distinctus	2		3	1		1	
Lype diversa			1			1	
Psilotreta					2	1	
Molanna							
Setodes	1						
Ceraclea							
Micrasema		4					
Brachycentrus	11	14					
Lepidostoma	1	1			3	1	1
Heteroplectron							
Glossosoma	2	1		9	10	7	
Agapetus			2				
Neophylax						1	

TAXON	LG01	LG02	LG03	LG04	LG05	LG06	LG07
Polycentropus		2	1	1		1	1
Nyctiophylax							
Hydrophilidae							
Gyrinidae							
Psephenus herricki	97	40	31	2			1
Ectopria	1	3	1	7		4	3
Helichus							
Stenelmis							
Optioservus	2		1		7	10	3
Promoresia	1			1	1		
Oulimnius latiusculus	2	7	3	17	1		24
Macronychus							
Anchytarsus							
Blepharicera							
Tabanidae							
Tipulidae			1				
Tipula		1		1	3	2	
Antocha		7	1				
Dicranota	4	1	7				2
Hexatoma	4	10	42		7		3
Pilaria	18	47		8			
Pericoma							
Dixa							
Simulium				2	1		
Prosimulium							
Chironomidae	28	69	44	29	52	24	22
Ceratopogonidae		1	2	1	1	2	
Atherix	1						
Hemerodromia							
Chelifera							
Oreogeton							

Macroinvertebrate metrics for sample collected from Mill Creek (ML), July 3, 2002.

	ML01
Total Number of Individuals (N)	865
Number of Taxa	40
Number of EPT Taxa (EPT Taxa)	21
Number of Clinger Taxa (Clinger Taxa)	20
Percent Clingers	52.72
Percent 1 Dominant Taxon	18.96
Percent 2 Dominant Taxa	36.53
Percent Tolerant Organisms	26.94
# Intolerant Taxa	34
Percent Diptera	18.50
Percent Chironomidae	15.84
Percent EPT (%EPT)	54.80
North Carolina Biotic Index (NCBI)	3.79
Percent Collectors	28.32
Percent Filterers	12.14
Percent Scrapers	34.57
Percent Shredders	1.85
Percent Predators	22.08

Counts of macroinvertebrates collected from a site in Mill Creek (ML), July 3, 2002.

TAXON	ML01
Oligochaeta	
Planariidae	
Pleuroceridae	19
Sphaeriidae	1
Planorbidae	
Hydracarina	
Cambaridae	7
Asellidae	
Collembola	
Pteronarcys	
Tallaperla	5
Amphinemura	
Perlidae	
Neoperla	
Paragnetina	
Agnetina	
Acroneuria	5
Eccoptura xanthenses	
Beloneuria	
Perlesta placida group	
Perlodidae	
Yugus	
Isoperla	
Remenus	
Chloroperlidae	
Sweltsa	
Suwallia	
Leuctra	8
Ephemera	1
Caenis	27
Serratella	17
Drunella	
Ephemerella	
Eurylophella	
Timpanoga	
Baetisca	
Tricorythodes	
Leptophlebiidae	
Paraleptophlebia	6
Habrophlebia vibrans	
Habrophlebiodes	
Baetis (complex)	52
Centroptilum	
Stenonema	152
Stenocron	
Epeorus	1
Cinygmula subaequalis	
Leucrocuta	92

TAXON	ML01
Heptagenia	2
Rhithrogena	
Neophemera	
Ameletus	
Isonychia	28
Cordulegaster	
Corduliidae	
Gomphus	
Stylogomphus	
Progomphus	
Lanthus	164
Boyeria	3
Calopteryx	
Gerridae	
Veliidae	
Rhagovelia obesa	
Sialis	
Nigronia	
Nigronia fasciatus	
Nigronia serricornis	6
Corydalus cornutus	
Mayatrichia	
Hydroptila	2
Fattigia pele	
Phryganeidae	
Hydropsyche	
Cheumatopsyche	61
Diplectrona modesta	
Parapsyche	
Arctopsyche	
Helicopsyche	1
Pycnopsyche	
Goera	
Rhyacophila	
Wormaldia	
Chimarra	10
Dolophilodes distinctus	
Lype diversa	1
Psilotreta	1
Molanna	
Setodes	
Ceraclea	
Micrasema	1
Brachycentrus	
Lepidostoma	1
Heteroplectron	
Glossosoma	
Agapetus	
Neophylax	

TAXON	ML01
Polycentropus	
Nyctiophylax	
Hydrophilidae	
Gyrinidae	
Psephenus herricki	5
Ectopria	1
Helichus	3
Stenelmis	2
Optioservus	4
Promoresia	3
Oulimnius latiusculus	13
Macronychus	
Anchytarsus	
Blepharicera	
Tabanidae	
Tipulidae	
Tipula	1
Antocha	
Dicranota	
Hexatoma	3
Pilaria	10
Pericoma	
Dixa	4
Simulium	5
Prosimulium	
Chironomidae	137
Ceratopogonidae	
Atherix	
Hemerodromia	
Chelifera	
Oreogeton	

Macroinvertebrate metrics for samples collected from Pounding Mill Creek (PM), June 16, 2002.

	PM01	PM02	PM03	PM04	PM05
Total Number of Individuals (N)	272	319	588	353	809
Number of Taxa	46	37	44	38	37
Number of EPT Taxa (EPT Taxa)	26	23	29	24	21
Number of Clinger Taxa (Clinger Taxa)	17	12	17	14	10
Percent Clingers	44.49	28.84	35.03	38.53	34.36
Percent 1 Dominant Taxon	12.13	23.82	19.39	21.53	21.63
Percent 2 Dominant Taxa	15.86	23.77	30.44	36.83	17.26
Percent Tolerant Organisms	17.65	12.85	8.67	28.05	24.85
# Intolerant Taxa	40	32	38	33	29
Percent Diptera	17.65	19.12	13.61	29.18	30.41
Percent Chironomidae	12.13	11.29	6.29	21.53	21.63
Percent EPT (%EPT)	53.68	53.92	75.68	39.09	53.77
North Carolina Biotic Index (NCBI)	2.83	1.97	2.20	3.31	2.91
Percent Collectors	29.04	19.12	26.53	40.79	37.82
Percent Filterers	8.82	3.76	21.26	8.78	21.14
Percent Scrapers	39.34	48.59	21.60	29.18	13.23
Percent Shredders	11.40	13.48	11.39	8.78	17.43
Percent Predators	11.03	15.05	19.22	12.46	10.38

Counts of macroinvertebrates collected from multiple sites in Pounding Mill Creek (PM), June 16, 2002.

TAXON	PM01	PM02	PM03	PM04	PM05
Oligochaeta	6	2	8	6	5
Planariidae			1		
Pleuroceridae					
Sphaeriidae	1	1	1		1
Planorbidae					
Hydracarina					
Cambaridae	1				
Asellidae					
Collembola	1			12	1
Pteronarcys	8			1	
Tallaperla	6	2	28	5	31
Amphinemura		1	1	3	13
Perlidae				1	
Neoperla					
Paragnetina			12		
Agnetina					
Acroneuria	2	1	11	7	1
Eccoptura xanthenses	1				
Beloneuria					
Perlesta placida group		3			
Perlodidae		1			
Yugus					
Isoperla	1	1	16	2	1
Remenus	1		15	1	6
Chloroperlidae	1		2		
Sweltsa					
Suwallia					
Leuctra	9	34	28	17	70
Ephemera	7	13	2		
Caenis					
Serratella	2	5	28	2	1
Drunella	31	76	53		1
Ephemerella	12		65	9	23
Eurylophella		1	1	13	3
Timpanoga	1				
Baetisca					
Tricorythodes					
Leptophlebiidae					
Paraleptophlebia	2	2	4	17	94
Habrophlebia vibrans					
Habrophlebiodes			3	6	
Baetis (complex)	2		6		3
Centroptilum					
Stenonema	15	7	10	2	3
Stenocron				3	
Epeorus	12		1	2	
Cinygmula subaequalis			2		
Leucrocuta	2			2	

TAXON	PM01	PM02	PM03	PM04	PM05
Heptagenia			5		
Rhithrogena		1	3		
Neophemera					
Ameletus					
Isonychia	3	2	5	11	38
Cordulegaster	2	7	2	1	18
Corduliidae					
Gomphus					
Stylogomphus					
Progomphus					
Lanthus	6	7	2	4	12
Boyeria					
Calopteryx					
Gerridae				4	
Veliidae					
Rhagovelia obesa					
Sialis					
Nigronia					
Nigronia fasciatus					
Nigronia serricornis					
Corydalus cornutus					
Mayatrichia					
Hydroptila					
Fattigia pele					
Phryganeidae					
Hydropsyche			3		
Cheumatopsyche					
Diplectrona modesta	12	7	114	19	118
Parapsyche					
Arctopsyche					
Helicopsyche					
Pycnopsyche					
Goera					
Rhyacophila	4	3	17	4	9
Wormaldia		2			1
Chimarra					
Dolophilodes distinctus	6		2		
Lype diversa	1			4	
Psilotreta		2		1	6
Molanna					1
Setodes					
Ceraclea					
Micrasema					
Brachycentrus					
Lepidostoma	1	5	2		7
Heteroplectron					
Glossosoma	2	1	5	3	5
Agapetus		1			
Neophylax					

TAXON	PM01	PM02	PM03	PM04	PM05
Polycentropus	2	1	1	3	
Nyctiophylax					
Hydrophilidae		1			
Gyrinidae					
Psephenus herricki					
Ectopria	31		3	4	
Helichus					
Stenelmis		1	4		
Optioservus	2	15	9	54	12
Promoresia	5		20		
Oulimnius latiusculus	17	52	13	27	79
Macronychus					
Anchytarsus	6				
Blepharicera	1				
Tabanidae					
Tipulidae	1				
Tipula		1	8	5	20
Antocha					
Dicranota	3	14	21	16	11
Hexatoma	1	8	13	1	3
Pilaria					18
Pericoma					
Dixa	1	1		4	1
Simulium	2			1	13
Prosimulium					
Chironomidae	33	36	37	76	175
Ceratopogonidae	5	1	1		4
Atherix	1				
Hemerodromia					1
Chelifera					
Oreogeton					

Macroinvertebrate metrics for sample collected from Ridley Branch (RY), July 12, 2002.

	RY01
Total Number of Individuals (N)	359
Number of Taxa	33
Number of EPT Taxa (EPT Taxa)	19
Number of Clinger Taxa (Clinger Taxa)	12
Percent Clingers	24.51
Percent 1 Dominant Taxon	24.79
Percent 2 Dominant Taxa	20.28
Percent Tolerant Organisms	11.14
# Intolerant Taxa	30
Percent Diptera	14.76
Percent Chironomidae	10.31
Percent EPT (%EPT)	70.47
North Carolina Biotic Index (NCBI)	2.09
Percent Collectors	15.60
Percent Filterers	14.21
Percent Scrapers	10.58
Percent Shredders	47.35
Percent Predators	12.26

Counts of macroinvertebrates collected from a site in Ridley Branch (RY), July 12, 2002.

TAXON	RY01
Oligochaeta	1
Planariidae	
Pleuroceridae	
Sphaeriidae	
Planorbidae	
Hydracarina	
Cambaridae	
Asellidae	
Collembola	2
Pteronarcys	
Tallaperla	48
Amphinemura	1
Perlidae	
Neoperla	
Paragnetina	
Agnetina	
Acroneuria	6
Eccoptura xanthenses	
Beloneuria	
Perlesta placida group	
Perlodidae	
Yugus	
Isoperla	
Remenus	
Chloroperlidae	
Sweltsa	
Suwallia	
Leuctra	89
Ephemera	
Caenis	
Serratella	2
Drunella	3
Ephemerella	
Eurylophella	6
Timpanoga	
Baetisca	
Tricorythodes	
Leptophlebiidae	
Paraleptophlebia	2
Habrophlebia vibrans	
Habrophlebiodes	1
Baetis (complex)	2
Centroptilum	
Stenonema	6
Stenocron	
Epeorus	
Cinygmula subaequalis	
Leucrocuta	

TAXON	RY01
Heptagenia	
Rhithrogena	
Neophemera	
Ameletus	
Isonychia	5
Cordulegaster	2
Corduliidae	
Gomphus	
Stylogomphus	
Progomphus	
Lanthus	19
Boyeria	
Calopteryx	
Gerridae	
Veliidae	
Rhagovelia obesa	
Sialis	
Nigronia	
Nigronia fasciatus	1
Nigronia serricornis	2
Corydalus cornutus	
Mayatrichia	
Hydroptila	
Fattigia pele	
Phryganeidae	
Hydropsyche	
Cheumatopsyche	
Diplectrone modesta	45
Parapsyche	
Arctopsyche	
Helicopsyche	
Pycnopsyche	
Goera	
Rhyacophila	7
Wormaldia	
Chimarra	
Dolophilodes distinctus	1
Lype diversa	
Psilotreta	1
Molanna	
Setodes	
Ceraclea	
Micrasema	
Brachycentrus	
Lepidostoma	26
Heteroplectron	
Glossosoma	1
Agapetus	
Neophylax	

TAXON	RY01
Polycentropus	1
Nyctiophylax	
Hydrophilidae	
Gyrinidae	
Psephenus herricki	
Ectopria	6
Helichus	
Stenelmis	
Optioservus	2
Promoresia	2
Oulimnius latiusculus	16
Macronychus	
Anchytarsus	
Blepharicera	
Tabanidae	
Tipulidae	
Tipula	6
Antocha	
Dicranota	6
Hexatoma	
Pilaria	
Pericoma	
Dixa	4
Simulium	
Prosimulium	
Chironomidae	37
Ceratopogonidae	
Atherix	
Hemerodromia	
Chelifera	
Oreogeton	

Macroinvertebrate metrics for samples collected from Sheeds Creek (SH), June 27, 2002.

	SH01	SH02	SH03	SH04
Total Number of Individuals (N)	153	284	295	597
Number of Taxa	29	36	36	40
Number of EPT Taxa (EPT Taxa)	16	20	22	19
Number of Clinger Taxa (Clinger Taxa)	14	16	19	14
Percent Clingers	68.63	64.44	55.59	40.54
Percent 1 Dominant Taxon	17.65	15.49	17.29	16.92
Percent 2 Dominant Taxa	28.10	28.52	16.37	16.07
Percent Tolerant Organisms	28.10	11.27	21.02	27.81
# Intolerant Taxa	22	30	31	34
Percent Diptera	5.88	6.69	12.54	19.43
Percent Chironomidae	3.27	4.58	9.15	16.92
Percent EPT (%EPT)	66.01	63.73	52.20	41.37
North Carolina Biotic Index (NCBI)	3.84	3.16	3.30	3.46
Percent Collectors	26.80	13.38	18.31	28.64
Percent Filterers	26.80	5.63	14.58	3.18
Percent Scrapers	24.84	66.20	43.39	42.21
Percent Shredders	7.84	3.87	8.14	10.55
Percent Predators	13.73	10.92	15.59	15.24

	SH05	SH06	SH07	SH08
Total Number of Individuals (N)	272	762	226	181
Number of Taxa	34	51	35	24
Number of EPT Taxa (EPT Taxa)	18	27	20	11
Number of Clinger Taxa (Clinger Taxa)	18	22	16	10
Percent Clingers	35.29	38.71	33.19	25.41
Percent 1 Dominant Taxon	33.46	18.77	31.42	29.83
Percent 2 Dominant Taxa	46.69	36.09	24.08	40.24
Percent Tolerant Organisms	17.28	25.85	16.81	26.52
# Intolerant Taxa	28	43	29	22
Percent Diptera	15.81	21.00	14.16	26.52
Percent Chironomidae	13.24	18.77	10.18	23.76
Percent EPT (%EPT)	60.29	59.97	75.22	51.93
North Carolina Biotic Index (NCBI)	2.78	3.40	2.43	3.10
Percent Collectors	20.59	25.07	13.72	30.94
Percent Filterers	3.31	7.74	17.26	1.10
Percent Scrapers	29.78	30.71	17.70	25.97
Percent Shredders	34.19	18.77	35.40	30.94
Percent Predators	12.13	17.45	15.49	10.50

Counts of macroinvertebrates collected from multiple sites in Sheeds Creek (SH), June 27, 2002.

TAXON	SH01	SH02	SH03	SH04	SH05	SH06	SH07	SH08
Oligochaeta	2	5	3	44	3	1	2	5
Planariidae								
Pleuroceridae	3	5	2	18	1	1		
Sphaeriidae				1				
Planorbidae								
Hydracarina				1	1	1		
Cambaridae				1		2	1	1
Asellidae								
Collembola						1		
Pteronarcys	1		11				3	
Tallaperla	2	1			1	8	4	
Amphinemura						1		
Perlidae		4		10		9		
Neoperla		7	1	1			2	
Paragnetina		3	1	4		1		
Agnetina								
Acroneuria	3	1	19	8	2	21	14	4
Eccoptura xanthenses								
Beloneuria								
Perlesta placida group	2		1		2			
Perlodidae								
Yugus				1				
Isoperla		1			1		1	
Remenus						1		
Chloroperlidae			1	5	2	9	2	2
Sweltsa								
Suwallia						3		
Leuctra	7	10	13	61	91	132	71	54
Ephemera						2		
Caenis								
Serratella		4	7	2				
Drunella			3	1				
Ephemerella	8							
Eurylophella						5		2
Timpanoga								
Baetisca								
Tricorythodes								
Leptophlebiidae								
Paraleptophlebia					1	2		
Habrophlebia vibrans								
Habrophlebiodes		37	25	61	22	52	9	10
Baetis (complex)	14	13	6	20	13	24	1	4
Centroptilum			1					
Stenonema	6	30	1	2		56	13	10
Stenocron		1				5	3	
Epeorus	12		10	3	1	6	1	
Cinygmula subaequalis						1		
Leucrocuta	6	44	5	31	6	35	3	3

Heptagenia								
Rhithrogena								
Neophemera								
Ameletus								
Isonychia	1	2	7		1	1	1	
Cordulegaster						6		
Corduliidae								
Gomphus								
Stylogomphus				1				
Progomphus								
Lanthus	2	1	4	21	6	4	4	5
Boyeria		3	3			5	1	1
Calopteryx								
Gerridae								
Veliidae		1						
Rhagovelia obesa							1	
Sialis								
Nigronia								
Nigronia fasciatus						3		
Nigronia serricornis	9	3	2	14	2	33		2
Corydalus cornutus	3							
Mayatrichia								
Hydroptila								
Fattigia pele								
Phryganeidae								
Hydropsyche	5	5	26		3	15	7	
Cheumatopsyche	27	7	5	18	3	32	4	
Diplectrona modesta			2		1	5	16	2
Parapsyche								
Arctopsyche								
Helicopsyche		1						
Pycnopsyche								
Goera								
Rhyacophila				1	1	7	5	
Wormaldia							6	
Chimarra	5	2						
Dolophilodes distinctus	1		3			4	4	
Lype diversa								
Psilotreta								
Molanna								
Setodes								
Ceraclea								
Micrasema					1			
Brachycentrus								
Lepidostoma	1			1				1
Heteroplectron								
Glossosoma		5	2	6		1		
Agapetus								
Neophylax								
Polycentropus		3	4	11	12	19		2

Nyctiophylax								
Hydrophilidae								
Gyrinidae	1							
Psephenus herricki	3	33	51	79	27	54	11	17
Ectopria		2	2	1	4	2		
Helichus			1		1	1		
Stenelmis	4	25	31	19	5	8	1	2
Optioservus	16	5	4	31	5	13	1	4
Promoresia		1	1	2	10	4	2	1
Oulimnius latiusculus				1		6		
Macronychus								
Anchytarsus								1
Blepharicera								
Tabanidae								
Tipulidae								
Tipula	1			1		2	2	
Antocha					1			
Dicranota		1		2		1		
Hexatoma			2	5	4	2	3	3
Pilaria								
Pericoma						2		
Dixa		2		1	1		1	2
Simulium	2				1	2	1	
Prosimulium								
Chironomidae	5	13	27	101	36	143	23	43
Ceratopogonidae	1	1		1				
Atherix		2	8	5		8	2	
Hemerodromia								
Chelifera								
Oreogeton								

Macroinvertebrate metrics for samples collected from Sheeds Creek (Middle Fork) (SMF), July 1, 2002.

	SMF01	SMF02
Total Number of Individuals (N)	673	147
Number of Taxa	42	24
Number of EPT Taxa (EPT Taxa)	22	14
Number of Clinger Taxa (Clinger Taxa)	14	8
Percent Clingers	22.44	25.85
Percent 1 Dominant Taxon	42.35	25.85
Percent 2 Dominant Taxa	54.23	42.18
Percent Tolerant Organisms	14.26	19.05
# Intolerant Taxa	35	21
Percent Diptera	16.79	19.05
Percent Chironomidae	11.89	16.33
Percent EPT (%EPT)	74.44	69.39
North Carolina Biotic Index (NCBI)	2.19	3.29
Percent Collectors	19.02	21.77
Percent Filterers	8.92	2.72
Percent Scrapers	11.89	19.05
Percent Shredders	46.36	30.61
Percent Predators	13.67	24.49

Counts of macroinvertebrates collected from multiple sites in Sheeds Creek (Middle Fork) (SMF), July 1, 2002.

TAXON	SMF01	SMF02
Oligochaeta	8	1
Planariidae		
Pleuroceridae		
Sphaeridae		
Planorbidae		
Hydracarina	1	
Cambaridae	1	2
Asellidae		
Collembola	3	3
Pteronarcys		
Tallaperla	20	5
Amphinemura		
Perlidae	11	
Neoperla		
Paragnetina	2	
Agnetina		
Acroneuria	11	7
Eccoptura xanthenses		
Beloneuria		
Perlesta placida group		3
Perlodidae		
Yugus		
Isoperla		
Remenus		
Chloroperlidae	7	
Sweltsa		
Suwallia		
Leuctra	285	38
Ephemera		
Caenis		
Serratella		
Drunella		
Ephemerella		
Eurylophella		
Timpanoga		
Baetisca		
Tricorythodes		
Leptophlebiidae		
Paraleptophlebia	10	
Habrophlebia vibrans	8	
Habrophlebiodes	16	12
Baetis (complex)	3	1
Centroptilum		
Stenonema	21	1
Stenocron	9	2
Epeorus	4	
Cinygmula subaequalis		

TAXON	SMF01	SMF02
Leucrocuta	10	10
Heptagenia		
Rhithrogena		
Neophemera		
Ameletus		
Isonychia		
Cordulegaster		
Corduliidae		
Gomphus		
Stylogomphus		
Progomphus		
Lanthus	7	2
Boyeria	2	
Calopteryx		
Gerridae		
Veliidae		
Rhagovelia obesa		
Sialis		
Nigronia		
Nigronia fasciatus	3	4
Nigronia serricornis	3	
Corydalus cornutus		
Mayatrichia		
Hydroptila		
Fattigia pele		
Phryganeidae		
Hydropsyche	1	
Cheumatopsyche		
Diplectrona modesta	44	3
Parapsyche		
Arctopsyche		
Helicopsyche		
Pycnopsyche	2	
Goera		
Rhyacophila	9	3
Wormaldia		1
Chimarra		
Dolophilodes distinctus	14	
Lype diversa	2	
Psilotreta		
Molanna		
Setodes		
Ceraclea		
Micrasema		
Brachycentrus		
Lepidostoma	1	1
Heteroplectron		
Glossosoma		
Agapetus		

TAXON	SMF01	SMF02
Neophylax		
Polycentropus	11	15
Nyctiophylax		
Hydrophilidae		
Gyrinidae		
Psephenus herricki	24	
Ectopria	2	5
Helichus		
Stenelmis		
Optioservus	5	
Promoresia		
Oulimnius latiusculus		
Macronychus		
Anchytarsus		
Blepharicera		
Tabanidae		
Tipulidae		
Tipula	4	1
Antocha		
Dicranota	10	
Hexatoma	11	2
Pilaria	1	
Pericoma		
Dixa	3	1
Simulium		
Prosimulium	1	
Chironomidae	80	24
Ceratopogonidae	1	
Atherix		
Hemerodromia	2	
Chelifera		
Oreogeton		